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ADDRESSES.

ADDRESS ON STATE MEDICINE—THE PEOPLE AND THE PUBLIC HEALTH MOVEMENT.

Delivered at the Forty-third Annual Meeting of the American Medical Association, at Detroit, Mich., June 7, 1892.

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In view of the great interest taken by the profession during the past year in the success of the measure brought forward by Dr. Comegys, I have thought that a succinct review of this important topic would not be inappropriate on the present occasion.

One day, while in attendance upon my second course of lectures in the University of Pennsylvania, sessions of 1842–3, it chanced that, examining the rich and varied stores of literature at a second-hand book store, my attention was arrested by an unpretending volume with a copious title page, the gist of which was: "An Inquiry into the Sanitary Condition of the Laboring Population of Great Britain." I purchased the book and devoured the contents, and perhaps no other volume has so influenced the thoughts, studies and pursuits of a long life as has that uninviting Government document, for the "Report" which it contained was the work of a master mind after mature investigation. Edwin Chadwick, the young and obscure Secretary of the "Commission" in that "Report," made a mark upon the civilization not only of the British Isles and of the wide expanded British Dominions, but upon the entire world.

The "Report" is dated London, May, 1842, and closed with conclusions: "First, as to the extent and operation of the evils which are the subject of the inquiry; secondly, as to the means by which the present sanitary condition of the laboring classes may be improved." These four concluding pages contain an admirable summary of practical public hygiene. No one now, fifty years after their date, can rise from their perusal without admiration of the genius which after two and a half years' study and observation elaborated them. As a practical application of the Baconian method of philosophy, they may be placed along side with the celebrated Essay of Dr. William Charles Wells, upon the phenomena of dew.

Fifty years ago, the fearful ravages of Asiatic cholera among the poor or laboring people of the British Isles was still matter of general comment. At that time also, the effects of the then recent revolution known as Parliamentary Reform were becoming manifest, insomuch that the wants and welfare of the people began to attract the attention of statesmen and party leaders, and have from that day to this been the main topics for legislation. The great feature of British history for the past half century has been the constant, steady elevation of the masses, and the one leading topic under this general head has been the public health. For proof, reference is made to the Acts of Parliament.

In 1853, the city of New Orleans was laid waste by an epidemic of yellow fever without parallel in all its history. An able Sanitary Commission was appointed by the Board of Health to make a report on this epidemic, which was published by authority of the City Council in 1854. It is a large and carefully prepared octavo, by able men. The treatise "Upon the Sanitary Condition of New Orleans," by Edward H. Barton, A.M., M.D., especially, was widely commended. Undoubtedly it was of great service to the Federal Government during the occupation of New Orleans, 1862–66 inclusive, when the city was noted for its cleanliness and healthfulness.

In this creditable municipal document, New Orleans made a step forward which, had it been kept up until now, would have placed it alongside of Calcutta or Bombay, with a population of over half a million, and commercial relations with the wide world. The calamitous experience of Tennessee in 1878 and 1879 reawakened popular interest in New Orleans upon local and maritime sanitation, and if the people do not go asleep, once more rapid progress towards its due position as one of the world's great cities may be expected.

One of the most remarkable examples of the people moving actively for sanitary reform, is found in the "Report of the Council of Hygiene and Public Health of the Citizens' Association of New York, upon the Sanitary Condition of the City," published in 1865. This massive volume, truly a manual of practical sanitation, was gotten up under the guidance of some twenty-four eminent surgeons and physicians of New York, who constituted the "Council of Hygiene." Names known, honored, reverenced and loved by us all occur in this glorious list. With one accord they all assigned the foremost place to Elisha Harris, their Secretary, who with Joseph M. Smith, President, and Willard Parker, Vice-President, constituted the executive of the Council. Dr. Harris' report upon the local sanitation of the city, its defects and remedies, has always been regarded as a model.

The influence of the British example in sanitary reform is nowhere better seen than in Massachusetts, where in 1850 was published "Report on the Sanitary Condition of Massachusetts," by Lemuel Shattuck, an eminent writer and legislator. This highly educated and most public-spirited community was among the earliest to comprehend the far-reaching benefits of State or preventive medicine. It was the first to establish a State Board of Health, which for the most part it has liberally supported, and which has brought rich returns to the State in more ways than one.

It will thus be seen that in America as well as in Britain, sanitary reform was inaugurated not so much by the medical profession as by the general public, looking at first to its protection from disastrous epidemics, and next to relief from preventable diseases and improvement in daily health. It may be looked upon as an outcropping of the well-defined tendency of the times towards the elevation of the people. An epoch-making tendency, germinated by the American Revolution of 1776, which startled the world by that of France, 1789, and which, by the general consent of thinking people with all shades of opinion, is about to accomplish social results and changes, most likely improvements, not less in magnitude than was witnessed in the fourth century, when Christianity supplanted Paganism in the Roman world.

Though not a medical movement, yet from the knowledge required to put it forward, medical men were naturally from the start called in by its promotors, and very soon took the lead. This is especially true in America, where in nearly every instance of city or State progress physicians have been the pioneers. So much is this the case that there is now some danger of the public looking upon sanitation as belonging exclusively to our profession. No greater mistake can be made. For it is law, and not medicine, that is most concerned. The prevention of disease and its cure are two very different affairs. Let every man be a law unto himself, every household a separate unit, and society would soon be reduced to savageism so far as health is concerned, while practitioners of medicine would reap a rich harvest. On the other hand, so soon as households are contiguous every man becomes his brother's keeper, and the law must come in with its commands and its penalties.

Of recent years the medical profession has been endeavoring to remedy this error by calling in the assistance of the people through voluntary associations composed of all descriptions of persons, and with remarkable success. Medical science can dictate what kind of laws should be made for the promotion of the public health, but is powerless to enforce these laws. Here the people in their individual and collective capacity must act. They must realize that they are the Government, and if the great city is hideously unclean, so as to merit the chastisement of a dozen Rudyard Kiplings, and the little village so nasty that no one wishes to keep his family in it, they alone are responsible.

If time allowed, we could fill pages with the enumeration of citizens' volunteer societies, from the "American Public Health Association," founded in 1872, now embracing the entire North American Continent, to "The Ladies' Health Protective Association of the City of New York," established some twelve years later, and which has already accomplished great good. These associations are doing much to correct the idea that sanitation is a merely medical business. If as active and as potent for another decade as in the past one, that mistake will be eradicated.

A powerful auxiliary in this line is the influence of the magazines and weekly publications. These abound in well written and highly scientific articles on all topics of public no less than private hygiene. Medical science is fast becoming public property. The magnificent progress upon which we so much pride ourselves of late years is the result of advances in chemistry, physics and biology. These belong to the great republic of science, and not to the mere province of medicine. We are the debtors of the scientists; not they to us.

Medicine, like theology and law, is rapidly passing from the esoteric to the exoteric stage. It can no longer be a secret or mystic calling, looked up to with the reverence and fear begotten of ignorance. Hence it follows that if the profession wishes to maintain the position hitherto freely accorded to it by the people as leading in sanitary reform, it must become a body of scientists. This it will be when, in due course of time, the improvements now rapidly taking place in the medical curriculum become universal.

At present, the special topic connected with the sovereign people and its action upon the public health in which this body takes the most interest, is the connection of the Federal Government with the work. Strangely enough, of all nations the American Republic is most backward in looking to the public welfare as it respects health. And that too, when there are certain great features which make the entire people one, with corresponding wants to be supplied, which only a rich and powerful Government can effect.

No sooner were local boards of health tolerably numerous in the United States and the establishment of State Boards well under way, than the necessity of Federal action was keenly felt, not only for coördinating and completing the work of these bodies, but also for accomplishing indispensable functions beyond the power of our largest cities, or most powerful and wealthy States. The argument for this Federal action is well stated by one of its earliest advocates, if he be not the first—the late Christopher C. Cox, M.D., LL.D., President of Board of Health, Washington, D. C., who as far back as 1871, devoted much time and energy in making known his views. I quote from the first volume of "Reports and papers of the American Public Health Association," pp. 523, 524.

"Important as is the preservation of health and prevention of disease, both in regard to individuals and communities, and early as the subject forced itself upon human attention, public hygiene never, until a comparatively recent period, assumed its deserved position, or became entitled to consideration as a distinct science. The frequent and terrible invasions of epidemics, and the occasional increased violence of endemic maladies, stimulated energy and research in the discovery of suitable means to prevent or modify the ravages of these relentless foes to health and life. The public mind became imbued with the imperative demand of such measures. Boards of health were everywhere established, the result of whose labors has been very largely aided by successful researches in the kindred sciences of physiology, pathology and chemistry. Who at this day questions the value of these local organizations?

"The idea of a central bureau of health is not perhaps altogether original with the author of this essay. More than fifteen years ago, an able treatise was issued from the English press, by Henry W. Rumsey, entitled "Essays on State Medicine." The original design of the work comprehended the establishment of a Central Sanitary Board under Government direction. The scope of the treatise was at first very extended, embracing the "bearings of preventive medicine upon the several questions of general legislation,

as education, public works, popular representation, agriculture, commerce, etc., and to inquire how far hygienic principles had been, or might be recognized in the framing or execution of various measures of National inquiry and reform. Since the publication of this work, England has organized a central health department, and is now seriously contemplating a ministry of public health. Prussia, under the direction of Bismarck, is engaged in similar movements, while Germany has been long distinguished for her comprehensive National health code. The object of these efforts in Europe is what we desire to accomplish in this country, namely: the collection of the largest amount of correct information upon every subject connected with the public health, and sow it broadcast over the land, for the benefit of the whole people.

"Regarding the constantly increasing sanitary wants of our country, its extensive geographical area and varieties of climate, its climatic zones marked by certain morbid peculiarities and endemic diseases, its hydrology, the thousand agencies and influences threatening its soundness, it occurred to me that our government should advance among the first to conserve the health of its population, and avert the disasters which menace it. With this view, I prepared in 1871 the plan of a National bureau of health. This was subsequently submitted, as you are aware, at a meeting of sanitarians, representing the different sections of the country assembled at New York, and indorsed by them in a series of commendatory resolutions. Since then an 'American Health Association' has been organized, embracing in its membership the leading scientists and sanitarians of the United States and Canada; and at their last meeting, a special committee, of which I am chairman, was appointed to report upon the 'necessity of a national sanitary bureau.' I allude to these facts for the purpose of showing that I have not urged this subject prematurely before Congress, but after full and earnest interchange of views with others whose high standing entitles their views to credit and respect."

The American Public Health Association was organized in 1872 by a conference of prominent Sanitarians. At this conference Dr. Cox again brought his plan forward. At the first Annual Meeting of the Association, Cincinnati, 1873, Dr. Cox made an elaborate report from which the above extract is taken. This report appears at length in the first volume of "Public Health", 1875. Thus it seems that the ideas of Dr. Cox were widely and persistently pressed upon the attention of sanitary bodies, and are still bearing fruit.

Had this effort been properly seconded by the medical profession, the Bureau would doubtless have been established. Nothing came of it, and when the Yellow Fever epidemics of 1873 and 1878, and also the widely spread devastation of cholera in 1873, terrified the land, no resistance was made. However, this very helplessness aroused the people, especially those of the Interior Valley which had most suffered. At the Richmond meeting of the American Public Health Association,1878, action was taken which resulted in the creation of the "National Board of Health," by Act of Congress, approved March 3, 1879. Great pains were exercised to harmonize this Board with State and Local Boards. Its members appointed by the President were typical representatives of the profession. When organized on the second of April, 1879, these members chose as their President and Vice-President, two physicians of whom it is safe to say that they had the confidence and esteem of the whole country. This confidence was soon tested by the second Memphis epidemic, that of 1879, which broke out in mid-summer. In coöperation with the Tennessee State Board of Health, Memphis was isolated, or quarantined, the destitute cared for and no spread of the disease allowed. Immediately upon its abatement, in conjunction with the Memphis authorities, the National Board entered upon that course of sanitary re-generation which has since made the said city a favorite example for sanitarians at home and abroad.

How it came to pass that after a few years, just sufficing to prove its great capacity for good, it was starved to death, no one has satisfactorily explained. Perhaps it was owing to the fact of not being in the usual model of government offices at Washington. Had it been a Bureau in the Department of the Interior, those familiar with Washington, hold that it would now be in existence, and in a fair way to become a Department, with or without a seat in the Cabinet.

Concurrent with the decline of the National-Board of Health has been the expansion of the Marine Hospital Service, which in some respects already represents the government in the field of preventive medicine. *De facto* the U. S. M.-H. S., is one of the most important "Bureaus" at Washington both as to expenditures and duties. It has as its head an accomplished medical gentleman who owes his position to merit alone, and who is virtually a "Medical Commissioner of Health." Some have maintained that the readiest way to reach the desired end would be to change this "Service" into a "Bureau of Public Health," leaving it what functions it now has and adding others. What is now the very important "Weather Bureau of the Department of Agriculture" began in a very insignificant way as the work of "the Chief Signal Officer of the Army." Truly a great oak from a little acorn. The overshadowing postal department began in an equally obscure manner about a century ago.

Prior to 1862 "Agriculture" was hid away in the Patent Office, itself a Bureau in the Department of the Interior. It then became a Department with a commissioner at its head. Recently its head has become a Secretary with his place in the President's Cabinet. And now it proudly holds its position as second to no other branch of the people's government.

Growth, or evolution if you prefer, seems to be the law at Washington. Sooner or later the Department of Public Health will exist as a part of the National government. This department will embrace under its capacious folds several functions now partially filled by services attached to different departments. In the meantime the more efficient these services are rendered, the more complete will be our Ministry of Public Health when created.

Maritime quarantine is by common consent deemed a foremost duty of the Federal government. The States have been tried and found wanting as safeguards against the importation of those pestilential exotic diseases, most feared by the American people. This duty in a partial way is now confided to the United States Marine Hospital Service. That in-

strumentality should in this respect be made perfect and thorough, fully equipped for watching all our immense lines of ocean, gulf and lake coasts. This is so generally recognized that a very little effort by the profession speaking for the public, would secure the necessary appropriation.

One great Bureau in a Department of Public Health would be that of vital statistics. This touches every man, woman and child in all our 70,000,000, even more than does the Weather Bureau, which is an exceedingly popular concern with the people. Without vital statistics, reliable and not guesses, the servants of the Public Health are working in the dark. The birth rate, the death rate, the prevalence of diseases as shown by mortality tables are fundamental data for our guidance.

Reliance upon State efforts to furnish these is shown by the experience of more than a century to be absolutely futile. There is an existing agency of the government known as the Census Office in the Interior Department, which every ten years has an immense work in hand. For collecting vital statistics, this service should be perpetual. It is quite safe to estimate that an expenditure of about half a million of dollars annually, would maintain a system of registration recording the wanted facts connected with each birth and death in the entire vast Republic. This system of registration can easily coöperate with State and Local Boards, only it would be uniform and paid for out of the general fund. It is hardly necessary to elaborate this idea. The absolute necessity of such a registration for public health purposes, and its manifold benefits to the business interests of all parts of the country are manifest to the most casual observer.

Another much wanted sanitary work directly within the province of the general government is the execution of a minute topographical survey of the entire country, and the mapping its results on a scale so extensive as to embrace every important local feature. Such maps are needed by the agricultural, commercial and military interests of the people. For all public health improvements, these maps are indispensable. For health purposes the whole seventy or it may be one hundred and seventy millions of people constitute but one family. The immense area of three million and more square miles, with its circumambient atmosphere is only one great big habitation. As the Weather Bureau keeps us constantly informed of aerial changes, so should the permanent features of the house be made known once for all by an analogous Bureau, whose field is the land, and the water in and around the land. Such surveys and such minute maps splendidly executed have long since been commenced or finished by Great Britain, Spain and other European governments. Every advanced nation in the world recognizes the value of this work as a contribution to general science and as an aid to home development. It pays well and cannot be done by the separate fragments of a great country. It can be undertaken alone by a great and rich people.

This survey and mapping has been commenced on a small scale and for two definite purposes, years ago by the United States government. Under the Treasury Department there is the Coast and Geodetic Survey, which under the superintendence of very able scientists has accomplished results of immense value to the commercial and naval interests of America. Extensive as is this survey, it is but an item in the great scheme outlined above, though the indispensable beginning of the same.

In the Department of the Interior we find the U. S. Geological Survey a complement to the last mentioned. The results of both these surveys combined make a useful whole.

There is a function of the National Public Health work which is now performed in a disconnected manner by several Bureaus and offices at Washington. I refer to scientific research and outfit of value to State Preventive Medicine, beyond the scope or the obligations, no less than the means of the individual States. Such researches are made under special provisions in Acts of Congress, sometimes by the Marine Hospital Service and its able corps of experts; sometimes by the Smithsonian Institution; at others by Commissioners appointed by the President for a definite purpose. A recent result of the latter is the valuable cyclopædic "Report on Cholera in Europe and India," by Dr. E. O. Shakespeare, who was appointed by President Cleveland, Oct. 1, 1885, and who on Nov. 17, 1890, transmitted his great work to Secretary Blaine, after having given five years of travel and study to its preparation, "all voluntary and without pay for personal service." Perhaps there is no other instance of an individual holding the high appointment of Commissioner from our National government, acting in so patriotic and liberal a manner, and furnishing an example so worthy of imitation by men of means and culture. Well may the medical profession take an honest pride in such a worthy colleague.

The outfit of special interest and usefulness to the workers in sanitary progress at present furnished by the Washington Government without reference mainly to this purpose, are twofold. The Museum of Hygiene under the care of the Department of the Navy. This is a new establishment, which though supported by meagre appropriations, has already demonstrated a capacity for very valuable services. If the plans of those in charge are carried out, but a few years will elapse ere a constant stream of pilgrims will visit Washington from cities and towns in order to get practical knowledge, which otherwise would cost long and tedious research. The medical profession should see to it that this very important museum is not overlooked by Congress.

But best known at present is the "Library of the Surgeon General's Office of the U. S., Army." Under this insignificant title, indicating a very limited use, has in a few years grown up one of the most complete medical libraries in the world. Also it is in buildings, equipment, volumes and management a leading institution of the Union. It has given honorable renown to our country, among all scientists abroad. It is the great storehouse for information freely accessible to all who devote their energies to healing or preventing disease. Who would imagine that at this late day any statesman at all in contact with the one hundred thousand practitioners of medicine in these States, would dream of reducing its modest allowance of ten thousand dollars per annum, to the miserable pittance of one half that amount?

The general government does far more for sanitary science than at first sight appears, or than it has had credit for. This is evident from the above rather imperfect analysis of its disjointed work.

If a Department of Public Health were now created, with its head holding a seat in the President's Cabinet, it could at once be furnished with an ample number of Bureaus to give it a high place in the public esteem, and to keep that head fully as busy as any of his colleagues. The U. S. Marine-Hospital Service, expanded as it ought to be would furnish at least three Bureaus with a number of drawers each. Namely, those of Maritime Quarantine, the Marine Hospitals, and Scientific Researches. The Coast Survey, the Geological Survey, the Great Medical Library and Museum, with the Museum of Hygiene would constitute also ample Bureaus for first class Commissioners. While the Bureau of Vital Statistics would soon become almost a Department by itself.

Let it be well understood that the elimination of all these offices from the departments now looking after them,in order to make up a great Department of Public Health, can take place with no injury, but rather a relief to the present Secretaries. The overburdened Treasury Department can readily spare the U. S. Marine-Hospital Service and the Coast Survey. So can that of the Interior, the Census Office and Geological Survey. War has ample scope and verge enough without the Medical Library, as has the Navy without the Museum of Hygiene.

In looking over the transactions of the American Medical Association for the past twenty years one is impressed with its indifference to the work of the Federal Government in promoting the public health rather than otherwise. As late as 1877, the expressions were that it was too early to move in this direction, and that action should be deferred until State Boards of Health were generally created. The success of the American Public Health Association before Congress in 1878-9, proves that this was an erroneous idea, and that the people were ahead of the profession in sanitary progress.

At the Washington meeting of this body, 1884, Prof. Deering J. Roberts, M.D., of Tennessee, in an elaborate address on State Medicine, strongly argued for a "Minister of Public Health." Had this thesis been taken up and pushed by the medical profession as it should have been, ere now the *projet* would have been *un fait accompli.*

More recently the American Medical Association has become alive to the necessity of action. This is evidenced by the greatly increased interest taken in the Section of State Medicine, which for years had an existence almost nominal. Also by the tone and substance of the addresses from our presidential chair.

The able and well considered efforts of Dr. C. G. Comegys have at last awakened this Association to an interest never before manifested by it in behalf of National sanitation.

Now there should be no uncertain action. The other chartered and National organization, which for twenty years persistently worked on this line, and at one time with marked results,has a standing Committee on "National Health Legislation." This Committee is composed of eminent men from all sections of the great republic and is charged with the duty of keeping the subject before the National Legislature. Would it not be well to have a similarly empowered permanent Committee from this body, which acting in concert with the American Public Health Association, the American Association for the Advancement of Science, the Congress of Physicians and Surgeons and other scientific bodies should do efficient service in advancing the cause?

In concluding this brief outline of a grand movement, let it be emphatically stated that of all the reforms projected and pushed in this busy nineteenth century, none touches the great masses more closely than this. The people, the working and voting people are with us. Read the manifestoes of the numerous labor organizations of America in which are gathered not only the sinews but the brains of a mighty people, and you will see as a keynote running through the whole diapason, the sacredness and value of home, of wife and children. And hence constant allusions to sanitary wants and improvements. No better sign for the future permanence, grandeur and happiness of the greatest Nation upon whose domain the sun has as yet shed its rays, could be desired.

DELIVERY THROUGH THE ABDOMINAL WALLS vs. CRANIOTOMY, IN OTHERWISE IMPOSSIBLE BIRTHS.

Read before the Section of Gynecology and Obstetrics, at the Forty-third Annual Meeting of the American Medical Association, at Detroit, Mich., June, 1892.

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It is not the purpose of this paper to decide what degree of contraction or what other obstructions render birth through the natural passages impossible, nor is it its purpose to consider the indications for inducing premature labor, but simply to discuss which shall be done—some form of Cæsarean section or a craniotomy in cases in which election between them is called for and possible.

Of course the first and most important thing to be considered (not the *only* question however), is the maternal risk or mortality under the respective operations. If it should be proven that the one in all cases or in most cases, is exceedingly more dangerous to the mother than the other, our action should be largely guided by that determination. There are conditions which modify this mortality in individual cases; whether, on the one hand, the mother through long labor and ignorance or neglect, or careless handling on the part of her attendants, has become septic and so exhausted that her life would be very greatly imperiled by the shock of the Cæsarean section, and, what should be considered coincidently, whether the fœtus still shows evidence of so much vitality as would justify subjecting the mother to added risk for the mere possibility of saving it. On the other hand there must be considered the risks of embryotomy in the individual case; whether the destruction and piecemeal extraction of the child may not be as dangerous or more dangerous, to the mother, all things considered, than is the extraction of even a dead fœtus through the abdominal walls. Into the discussion of possible individual cases, however, it is not my purpose to enter.

The primary and basic question, so far as the maternal risk only is concerned, would seem to be that of the relative mortality of embryotomy done deliberately in suitable cases before the mother is either septic or exhausted, and Cæsarean section, either the improved Cæsarean or Porro operation, done under the same conditions. The writer despairs of answering this question for the reason

that craniotomy has not yet been done in this premeditated way sufficiently often to determine what its mortality would be were it so done. The woman is usually permitted to exhaust, and possibly infect herself, maybe by days of fruitless efforts to deliver herself, and by attempts on the part of her attendants to deliver by forceps or version or both, before craniotomy is performed.

The operation of craniotomy is so repugnant, excepting as the last possible resort, that even when practically convinced that it must be done later, if labor and attempts to deliver by forceps or version are permitted to proceed, many obstetricians, even the most skilful, hope against hope and for their own sake, as well as for the sake of the parents and friends, permit such fruitless labor to go on and attempt all other procedures until it is demonstrated to all interested that the delivery is impossible, before resorting to craniotomy; and the writer believes, because of the nature of the operation, that this will always be the case in general practice where embryotomy is held in thought as a possible last resort and as an excuse for avoiding a section. So that it is impossible to obtain sufficient data upon which to base a statement as to what the maternal mortality would be were craniotomy deliberately resorted to at the very commencement of labor.

This is not true, however, of Cæsarean section. In these later days it has been resorted to deliberately and with all the conditions favoring its successful determination, and our conclusions as to the possibilities of this operation should be based on the results of it so done. It is unnecessary to state that our estimate of the danger of either procedure must not be based upon results obtained before the Listerian era. Such results have no relation whatever to the mortality that may be expected from either operation in these days. Surgery, and especially obstetrical and abdominal surgery, is a new art, and it is no more fair to judge what the results will be in the future by the statistics of either operation performed before the time mentioned than it would be to judge of the mortality of ovariotomy tomorrow by the results of Washington L. or John Atlee's cases.

Besides the question of the maternal risk there comes the question, which has not heretofore been sufficiently considered and which it has been the custom to ignore, and that is, as to what amount of risk the mother is to be subjected in order that her child's life may be saved. The purpose of pregnancy is a living child; and this should never be forgotton. Supposing, for instance, that the mortality for Cæsarean section in cases parallel to a special case that may be under consideration, is twenty per cent. to the mother and five per cent. to the child. Supposing further that the mortality of embryotomy in such a case is estimated at eight per cent., is the mother to have all the chances for life that she may possibly have and the child to have none? Or shall the mother relinquish twelve additional chances for her life, still having eighty in the hundred, in order that her child may have ninety-five of its hundred? Or shall the child give up its whole hundred chances in order that the mother, who, in a Cæsarean section, would already have eighty in the hundred, may have twelve more?

Has the unborn child any right the obstetrician is bound to respect?

Let us determine first, as accurately as we can, what the mortality of embryotomy is, done under as good conditions as we should be likely to find. I am perfectly aware that some obstetricians claim that in properly selected cases, embryotomy is without a mortality. For instance it is stated that Leopold has had ninety-two craniotomies without a death and Dr. Robert A. Murray, in the *New York Medical Journal* of June 1, 1890, says, while pleading for the Cæsarean section, "my own statistics are that in over twenty craniotomies performed under strict antiseptic precautions, I have not had any mortality. About half of these were done on the after coming head." And yet the fact remains that women die after it and apparently in consequence of it. It has its serious risks. There are the risks of sepsis, and of hæmorrhage and of shock.

The best collection of statistics as to its mortality that I know of, is to be found in Dr. E. P. Davis's article in the second vol. of the American System of Obstetrics. These statistics represent the operation as done since the introduction of antiseptic measures. He quotes the reports of Spiegelberg's cases, of Wyder's, Merkel's, Olshausen's, Winckel's, Jaggard's Report of Carl Braun's cases, Präger's cases, Determann's Statistics and Caruso's Statistics. The death rate in these cases runs from one and four-tenths per cent. to thirteen and three-tenths per cent., and the average mortality of the operators quoted is 7.95 per cent. So that it is fair to say that the maternal mortality, in such cases as those in which embryotomy has hitherto been done by the best operators under presumably the best condition, is *about* eight per cent.

In addition too, to the risk to the mother's *existence* we should not lose sight of the question as to what her condition in after life may be: the risk of laceration, of fistulæ, of injury to ovary, tube or uterine body, and the possibility that in many cases an operation more serious than a deliberately performed Cæsarian section may be necessary before the mother will have again a condition of health making life worth living. Furthermore there is the awful suspense to the woman and her friends, the long, dreadful, painful ordeal and the disappointment that comes from the fact that after all she has gone through during her pregnancy and her labor, the purpose of it all, the birth of a living child, has not been achieved.

We must compare the mortality of the Cæsarian section with that of the operation we have just considered. For this operation also it is claimed that there should be no death rate. I quote Dr. Egbert Grandin, who says "The Cæsarian section performed advisably ought not to have a mortality rate." But as in the case of the other operation, we find that women do die after it and apparently in consequence of it. It has its risks; those of sepsis and of hæmorrhage—not so serious, in my judgment, as they are in embryotomy—and the risk of shock, which is possibly greater.

Dr. R. P. Harris[1] states that Sänger has operated eight times consecutively without a maternal death, and Dr. Cameron, of Glasgow, ten times with but one death. In this country within the last few years Dr. Howard A. Kelly has operated four times without a death, Dr. Wm. Goodell twice without a death, and Dr. Lusk four times—losing one patient. Dr.

1 Gynecological Transactions, 1891.

Joseph Price, of Philadelphia, has performed the Porro operation five times with no deaths. Leopold, in his cases from 1884–88 inclusive, has had a death rate of 8.6. These were Porro operations. Zweifel lost but one woman and one child in eighteen (new operation) cases. The woman that he lost was eclampsic when operated on, and, it is claimed, died from eclampsia. Dr. Harris, in the *American Journal of the Medical Sciences*, October, 1891, quotes the statistics of Leipzig, furnished him by Prof. Sänger, showing thirty-eight cases by eight operators with three maternal deaths and four children lost. Two of the women died of septic peritonitis, the other was Zweifel's case just spoken of. These thirty-eight cases include Zweifel's eighteen cases. Dr. Harris further says (it is impossible to avoid quoting Dr. Harris, for he has contributed much to the study of this subject) that in the Maternity of Allgemiene Krankenhaus, Vienna, there were twenty-five Cæsarean deliveries by both the improved and the Porro method from 1886–89 with only two women lost and all the children were saved.

I do not care to go further into statistics. Such inquiry, unless limited, is apt to prove too much or too little. The figures I have quoted, by showing what *has* been done, prove what *can* be done, and unless the world stands still, better results than these will be achieved in the near future. From these figures I believe it to be fair to state that the mortality of the improved Cæsarean section, done in women not exhausted by labor, and done under proper antiseptic or aseptic precautions, by skilful operators, is not over 10 per cent.; and that the mortality of the Porro operation under the same conditions will not greatly, if at all, exceed this. Now even if the contention that has been made, be granted, and we decide that, while Cæsarian section has a death rate of about ten per cent., craniotomy has no death rate at all, I do not conceive that this is an overwhelming argument in favor of the latter operation in the class of cases that we are considering. Our training and traditional thought is such, that without an effort, we do not think at all of the living unborn child and we leave it out of our calculations. Parry in his classical paper read some years ago before the Philadelphia County Obstetrical Society emphasizes this absolute ignoring of the child's life, by calling attention to its value in these words—speaking of the statistics of the mortality of the seventy cases of craniotomy he quotes, he says "If we remember that in the seventy cases included in the appended table only thirty-three out of the 140 lives were saved, the truth becomes almost too horrible to contemplate."

I do not regard the physician as primarily the conservator of individual life; his duty is to all human life and to its conservation, and his obligation is as great, other things being equal, to life incarnated in one body under his care as to it in another. I grant that things are not equal as between the mother and her unborn child, but they are very much nearer so than is argued by the habit and thought of many obstetricians.

There are those, however, who believe that even considering the mother only, Cæsarian section done under proper conditions, is as safe for her as is craniotomy; and the safety of the former operation, compared with the latter, increases very greatly as her pelvis narrows. For instance Dr. Lusk says, speaking of craniotomy, "In the hands of an operator of limited experience, I believe the Cæsarian section, when timely made, offers ordinarily to the mother a better chance of recovery."

Dr. Harris says,[2] "The new Cæsarian operation in the hands of a Zweifel or a Leopold, in a case of extreme rachitic deformity of the pelvis, is less fatal than an embryotomy is in skilful hands where there is the same degree of pelvic stenosis."

Dr. Grandin in the *New York Medical Record*, of June 6, 1891, states that the operation (Cæsarian section) is not so dangerous as the removal of the uterus for fibroid tumors. He further states that the technical skill for a difficult craniotomy needs to be as great as for an ordinary Cæsarian section.

Dr. R. A. Murray[3] of New York, says in speaking of a case in which Cæsarian section was done: "but the operation must be contrasted with craniotomy, the only other resort in this case. Formerly Cæsarian section was only resorted too where craniotomy was out of the question, but now, where it becomes a question of saving the child, I hold that the preference should be given Cæsarian section, for, if the case be taken in time, we find that our statistics will become more favorable for the mother—even more favorable than craniotomy. I have nothing to complain of in craniotomy. I have not lost a patient, although I have had a number of cases. Yet I know operators who still maintain that Cæsarian section should not be done except for absolute indications. In one instance the operator spent three hours in relieving the patient of the child. She lived, but she had a torn vagina, a lacerated cervix, and an infection afterward which left her worse off than if she had been dead. I think we must take the after condition of the patient into consideration. Where it becomes a question whether to do laparotomy or craniotomy, I think that even the average practitioner, certainly the average laparotomist, will get about as good results from Cæsarian section, for the mother, and the child is saved."

Dr. Egbert Grandin said, in the discussion which followed this paper, "the statistics of Cæsarian section as clearly set forth in the paper which our distinguished colleague has read, fortifies me in the position which I have sometime held—that the time is ripe for the deliberate *election*, in hospital practice at any rate, of the Cæsarian section over embryotomy. Once let it be proven that we can save the child through the elective section, and yet not imperil the woman to a greater degree than does embryotomy, and there ceases to be an excuse for the destruction of the living fœtus."

Dr. Parry says in his memorable paper, from which I have previously quoted, "the Cæsarian section is much more easily done than craniotomy when the anterio-posterior diameter of the superior strait is two inches or below it."

The writer has heard Dr. Joseph Price, of Philadelphia, speaking in the obstetrical society upon the small risk in the Porro operation when properly done, say that he believed that he had done his last elective craniotomy, and the honored president of this section has expressed about the same conviction to the writer.

Dr. A. P. Dudley, of New York, in speaking of the danger of Cæsarian section, says "the elective Cæsarian section should have a lower mortality than the

[2] Gynecological Transactions, 1891.
[3] Gynecological Transactions, 1891.

average ovariotomy." This because of there being no adhesions, no uncontrollable hæmorrhage and the avoidance of sepsis.

So long as it seemed that in doing the Cæsarian operation upon a pregnant woman in the case of whom craniotomy might have been done, the result was almost invariably only the possible saving of a frail, infantile life at the expense of the mother's existence, there could be no question as to which operation should be performed. But that day has gone by and it is not to-day at all a question of the *saving* of one life at the expense of another, but merely a question of a not very great additional *risk* to one life in order that the other may be saved and that the purpose for which the woman entered into the marital relation and for which she became pregnant, might be achieved. Speaking of this question of risk, Dr. Grandin pertinently asks, "if the woman may take her life in her hands in order to get rid of, we will say a cystic ovary, *by what right* may she refuse to run about the same risk to save the fruit of her womb." He further says [4] "to state my position in a nutshell—given an instance of slight pelvic contraction in which the chances are against the delivery of a living child per vias naturalis, and the time for induction of premature labor with resulting viable child having elapsed, the obstetrician is justified in performing the Cæsarian section, provided always the fœtal heart sounds are clear and regular." I despair of finding better chosen words to express my own convictions and am tempted only to additionally ask whether, in such a case, he can be justified in any other procedure.

It would seem hardly necessary for me to emphasize the fact that the obstetrician alone must be the judge of what is to be done. The preference of the ignorant or prejudiced parents or of the friends, the disposition on their part to save the life of one being from any added risk at the expense of the other being, or any sentimental considerations on their part of any nature, for or against either life at the expense of the other, should not weigh at all in the obstetrician's mind or decide his course. The responsibility is his for his conduct in the case and he can not answer to his own conscience if he does that which he believes to be inadvisable or wrong, simply because someone else prefers that he should. Once let this principle obtain of permitting the parents or friends to judge and dictate what his course should be and where can we logically stop? Certainly not only when the woman has come to labor; as well should he be influenced by them at the fifth month or at the first as at the ninth. That he is justified in his action by the desire of his patient or her friends is the reasoning and excuse of the abortionist and if he is to be condemned for fulfilling such a request in the first months of pregnancy, simply because they desire it, so also is the obstetrician to be condemned for adopting a course, if he believe it to be unwise and wrong, simply because the friends or patient desire it; in neither case should their preference count as against his conviction. He should determine for himself the proper thing to do without letting sentiment or circumstance move him; should state that he will do this thing and this thing only and then either do it or give up the case. Either his firmness and conscientiousness will carry the day or someone else will be found more complacent. In either event his conscience will be clear. In no other operation, involving certainly the destruction of one human life, are men of conscience so apt to put their own trained intelligence and judgment absolutely in abeyance to the ignorant sentiment and prejudices of other people, as in that of craniotomy.

Speaking of the matter of permitting the friends or the parents to decide what should be done, Dr. E. H. Grandin says, in the *New York Medical Record*, January 6, 1891: "Should the laity have any voice in the decision whatsoever? As physicians, we are not to weigh the relative value of one life over another. We are called upon to do our best by the *two* lives committed to our charge, and if we can once deliberately conclude that the Cæsarian operation carries with it but slight if any greater risk to the woman than does embryotomy, then it at once becomes our duty to elect that operation."

View, for a moment, this operation of craniotomy in such cases as we are considering, in another light. Suppose, if you please, the mortality from Cæsarian section had been brought to 10 per cent. under proper conditions, as it has, and suppose that the operation of craniotomy upon a living child that could be delivered through the abdominal walls, had, up to this time, never been thought of, proposed or done, in what light would the man be regarded, who, while, advocating that Cæsarian section be performed in cases where from pelvic contraction or other cause, even a dead child could not be extracted through the pelvic outlet, advocating such a procedure, I say, under *such* circumstances, would to-day propose and inaugurate the up to this time unheard of and unthought of operation of craniotomy on the living child! Would his action not be regarded as monstrous and infamous? And would he not be in danger of both civil and criminal prosecution? Excepting that the operation is not a new one but has been done very many times, the conditions are such to-day as I have supposed. If we would condemn the man who would to-day inaugurate it, can we justify the man, who, it having been practiced, continues it?

Traditions are queer things. We are slaves to them in other lines than lines ecclesiastical. We have heard about, and seen, and read about and become familiar with this operation of craniotomy, and therefore it does not seem to us the horrible, awful thing it is, but if we can once bring to our mind what our horror and indignation would be if it were possible for us to be in such a position as I have just indicated (with the operation until now unheard of) we can realize to some degree what it really is. To-day I believe that practically in every case it is an unjustifiable procedure. There may be exceptions to this but certainly there can be no exceptions in our hospitals where our patients are under observation before labor, nor in our private practice where like conditions exist. Rarely, very rarely we may be called to cases where labor has progressed so far before our seeing the case that the extraction of a living child through the abdominal walls is an impossibility, and craniotomy on the after coming head is necessary. But this will be very, very seldom.

I have purposely avoided entering into the relative claims or mortality of the new Cæsarian and Porro operations. I have also avoided the whole question of whether the woman should be rendered sterile by the removal of her tubes and ovaries or the ligation of her tubes at the first operation.

[4] Gynecological Transactions, 1890.

The consideration of these questions or of the others which I avoided in the first words of this paper, while important, would now only befog what I have sought to make the sole question here. It is this: should craniotomy ever be done in those cases in which there can be and should be a deliberate election between it and a Cæsarian section? I vote—No.

One thing is most vividly brought to my thought by the consideration of this matter. It is the necessity for the more thorough training of medical students that they may recognize early when induced labor is likely to be required and to be successful, and when it is better to do a Cæsarian section and how to do it. They are taught to induce labor, they are taught how to do craniotomy; they are not always well taught as to how to do Cæsarian section and the Porro operation, and they are not always well taught as to when induced labor is likely to be successful, or how to recognize the cases in which they must be prepared to do, or have done, a Cæsarian section, either just before or at the onset of labor. I would not advocate that every man who is likely to attend a labor case should attempt to do Cæsarian section, neither would I advocate, did I believe craniotomy justifiable, that every man should attempt to do craniotomy. But I do believe that no man should be permitted to graduate from our medical schools, who has not such a knowledge of pelvimetry and what it means but that he shall know just what can be expected from and what must be done with every case under his care and know enough, even should he not feel competent to attempt an obstetrical operation himself, to have the services of someone for his patient who is able, not only to save *her* life, but also to deliver her of a living child.

In these days when every small city has its gynæcologist, fit and able and willing to do Cæsarian section, either at home or away from home, either for a fee or without it; when every little city has its hospital, public or private, where such an operation can be done if the patient's home is to humble for the necessities for it, there can be, in my judgment, but very rarely excuse for the sacrifice of human life made necessary by failure to recognize before hand the conditions necessary to be met and to use the means required to overcome them.

THE TREATMENT OF POSTERIOR ROTATION OF THE OCCIPUT DURING LABOR.

Read in the Section of Obstetrics and Diseases of Women, at the Forty-third Annual Meeting of the American Medical Association, held at Detroit, Mich., June, 1892.

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Among the complications of labor not requiring surgical interference, none is more important or fraught with greater danger to child and mother than posterior rotation of the occiput. We desire to substitute this term for that commonly employed —"occipito-posterior positions"—believing that the method of obstetric study that recognizes but two positions for each presentation is more rational and serves a better purpose than the more complicated system that calls for many positions. We shall then make but two positions for each presentation. For example, a vertex presentation has a first and a second position. The first is the usual one, the back of the child directed toward the left side of the mother, and the vertex directed slightly toward the left side of the mother's pelvis. The second position of a vertex presentation is that in which the back of the child is directed toward the mother's right side, and the occiput points to the right of the mother's pelvis.

During labor the occiput, in the vast majority of cases, turns forward, toward the symphysis pubis. Occasionally it descends through the pelvis, showing a tendency to turn posteriorly, thus giving rise to what have been styled "posterior positions." It occasionally happens that during pregnancy the occiput is situated behind the centre of the mother's pelvis; whether the occiput endeavors to turn backward, or whether during pregnancy it is situated slightly behind the centre of the pelvis, it is more rational and easier of comprehension to call this abnormal turning of the occiput "posterior rotation" than to make four positions, two of them posterior. In common with many Continental students of obstetrics, we style the condition as an "abnormal rotation of the occiput," and not as "occipito-posterior positions."

The causes of the tendency to turn posteriorly are several. The mother's pelvis may be narrowed in its anterior half and its sides may lack those surfaces anteriorly to a line drawn upward and forward from the spines of the ischia that normally favor the anterior turning of the head. The head of the child may be of unusual size or contour, finding its most convenient lodgment at the posterior extremity of one of the oblique diameters of the pelvic brim. Again, during labor, the posture assumed by the mother may not be such as to favor the anterior turning of the vertex. Many cases exist in which no one factor has been found to be entirely responsible for the abnormality; thus, a small child may enter the pelvis with its head in partial extension or flexion, and this intermediate condition remaining, the occiput may turn toward the hollow of the sacrum.

Some of the symptoms of posterior rotation of the occiput may be perceived before labor has actually begun, while others are discernible only after the commencement of labor. Palpation and auscultation will often reveal the fact that the occiput is directed toward the middle line or even slightly behind the centre of the pelvic brim. The back of the child may be turned somewhat posteriorly, so that the heart-sounds seem to come from deep in one side of the mother's abdomen. If the abdominal walls are thin, the occiput can be mapped out and accurately located. If a history of previous labors be sought, there will be an account of prolonged parturition, probably ended by instrumental delivery, and often resulting in the death of the fœtus.

At the time of labor it is often difficult to map out accurately the position of the head unless the tissues be elastic and admit of manipulation. If the attending physician notices the absence of the vertex in the anterior half of the mother's pelvis, he will do well to allow her to inhale sufficient chloroform to permit the introduction into the vagina of enough of the hand to make a positive diagnosis.

We shall best understand the indications for treatment by considering briefly the course of a hypothetic case if left to nature. Statistics show that the greater number of cases result in anterior rotation of the occiput without assistance. By some the proportion of cases that rotate spontaneously to the front is placed as high as 96 per cent.; others allow but 75

per cent. My own observation and the records of 219 cases occurring at the Philadelphia Hospital, lead me to believe that 87 per cent. of these cases terminate spontaneously with anterior rotation. A source of fallacy in a study of the question arises from the fact that an exact diagnosis of the position of the head is rarely made early in labor; a practitioner is often satisfied with finding that the head is presenting and that the face is not the part found by the examining finger. Thus, a case in which posterior rotation has begun, but which terminates by turning forward, is not recognized until anterior rotation has occurred.

If we seek to ascertain the factors upon which anterior rotation depends, we find them to be essentially three in number: First, a normal proportion in size between the head and the pelvis; thus, a small head in a small pelvis favors normal rotation, and a large head in a large pelvis is likewise favorable. Secondly, a flexed position of the head is essential to anterior rotation of the occiput. Thirdly, the forces of labor must be normal, namely: the contractions of the uterus and the resistance afforded by the pelvic floor. If any one of these factors is notably deficient, a perversion of rotation is very likely to occur.

Abnormal rotation of the occiput is a source of danger to the life of the child and to the integrity of the mother's tissues, and also to her life. The child's life is jeopardized by long-continued pressure during prolonged labor, resulting in visceral hæmorrhage and death. The mother's tissues are endangered by reason of the abnormal prolongation of the pressure of the head during efforts at rotation, and her life is imperiled by the added risk of septic infection and exhaustion.

The treatment of such abnormal rotation would rationally consist in an effort to supply the one or more factors already described that may be deficient or perverted. Although the physician cannot remedy disproportion in size between the head and the pelvis, the sooner he becomes aware of such disproportion the better for his patient. No woman should be attended during her first pregnancy unless her pelvis has been measured by her medical attendant. In making this statement we do not insist upon an elaborate measurement of the pelvis, but urge that three external measurements be invariably made. These are: the external conjugate, the distance between the anterior superior iliac spines, and the distance between the outermost points of the iliac crests. If the physician has the opportunity of making such an examination as early as the thirtieth week of gestation, he may, if necessary, be able to induce labor, thus securing a normal rotation of the occiput before disproportion between the head and the pelvis has gone so far as to endanger his patient. If he does not see his patient until she is considerably advanced in labor, the knowledge that her pelvis is smaller than the average will be of great value in preventing the futile effort to deliver a large head through a pelvis too small for it. In addition to the measurement of the mother's pelvis, an effort should be made to ascertain the comparative sizes of the head and the pelvis. This can be done by placing the patient upon her back, her thighs being flexed, while the fœtal head is gently pressed downward into the pelvis by the examining hand laid broadly behind the pubes, the other hand steadying the fundus of the uterus. If more exact information is desired, one hand may be placed against the head by internal examination, while pressure is exerted with the other hand behind the pubes. A head that begins to slip into the brim of the pelvis under such manipulation is not too large to rotate successfully during labor.

Flexion of the head, necessary to secure anterior rotation, may be promoted and maintained by the employment of the hand, accompanied by the use of forceps. When the physician discovers that the occiput is turning posteriorly, while the head is but slightly flexed, if the patient be anæsthetized sufficiently to permit the introduction of the hand, the occiput may then be drawn down, or the chin pushed upward, and flexion secured. If this effort fails, flexion may be secured by axis-traction with the forceps, as will be described in a succeeding paragraph.

Flexion and anterior rotation may be further facilitated by the posture of the patient; thus, if the back of the child be turned toward the left side of the mother and the occiput tends to rotate posteriorly, the mother should be turned upon her left side, with her thighs flexed and her shoulders bent slightly forward. This posture causes the fundus of the uterus, containing the body of the fœtus, to fall toward the left side of the mother's spinal column, as it will be remembered that the uterus normally occupies a position of right lateral obliquity in the abdomen of the mother. This movement of the fundus from right to left, by gravitation, favors the turning of the occiput from left to right, and thus anterior rotation of the vertex is expedited. If the child's back is directed toward the right side of the mother and the occiput seems about turning toward the sacrum, the mother should be placed upon her right side, with her body flexed as has been described and her right side propped up from the bed by means of pillows. Gravitation of the fundus is thus favored, and anterior rotation is more likely to occur.

The posture often instinctively assumed by women, namely, that of kneeling strongly forward upon the bed, is one that favors flexion and anterior rotation. The fundus of the uterus falls forward, the head tends to flex and descend into the pelvic cavity, and the long axis of the fœtus corresponds more perfectly with the direction of the axis of the pelvis.

In addition to posture, constant external pressure against the vertex sometimes favors anterior rotation of the occiput. Thus, I remember having seen a case so treated in the wards of a foreign hospital; the patient was placed upon her side and a small bag filled with sand was laid upon the abdomen against the vertex.

We now come to consider the last of the three conditions upon which anterior rotation depends, namely, the expulsive force of the uterus and abdominal muscles, and the resistance of the pelvic floor. If the former is deficient, a suitable stimulant to the nervous system is indicated: thus tea, coffee, alcohol and quinine are most available; it is rarely necessary to employ ergot, and exceptionally the faradic current of electricity has been found useful. A narcotic that causes labor to cease absolutely for a time, while the patient sleeps, has often been found of value, the patient on awakening rousing to renewed activity. Direct stimulation of the uterus by rubbing the abdomen, and by pressure exerted upon the head in the axis of the pelvis, may carry to a successful parturition a labor lingering in its last stage. Again, anæsthesia of a moderate degree may temporarily re-

move the depressing influence of pain and cause renewed uterine activity.

While such expedients are frequently successful, yet the forceps is very often the last resource of the practitioner. In this, as in all forceps deliveries, two methods are to be distinguished. One is that which all that use forceps desire to carry out, namely, the application of the blades accurately to the sides of the child's head; this requires a forceps modelled after French instruments, or shaped like the familiar blade devised by Davis, of London.

The other method of applying the forceps is that recognized as a valuable expedient, although not the ideal method of operating; this is the application of the forceps to the sides of the pelvis, and suggests the employment of an instrument modelled after the forceps of Simpson, of Edinburgh. In the first instance, forceps and head rotate together; in the second, the head rotates in the forceps, the blades remaining in the axis of the pelvis at the sides of its cavity. The first method requires for its safe performance a very accurate diagnosis of the precise location of the occiput; this will usually require anæsthetizing the patient and the introduction of nearly all or of the entire hand within the vagina. In the second method the occiput may not be definitely located, although its absence from its usual location may have been determined. The forceps is then applied to the sides of the pelvis, traction is made gently with the pains, and between the tractions the grasp of the forceps is relaxed, the head rotating within the forceps-blades, so that each application is virtually a new one.

Neither use of the forceps is skilful that does not at the same time employ axis-traction. All obstetricians are familiar with the simple manipulation of performing axis-traction with the hands, grasping the handles of the forceps with one hand and raising them, while the other presses downward and backward upon the instrument at the shank. If the case be a difficult one, this requires for its successful performance very considerable strength in the hands and wrists. The axis-traction forceps of Tarnier and those modelled after it represent an established method of securing axis-traction in these cases. The Tarnier instrument, however, is not convenient for the ordinary exigencies of confinement; it is too heavy, too large, and too expensive. Poullet, of Lyons, in a thesis described the application of the tapes as tractors to secure axis-traction. Many had already employed this, or a similar device, by passing a tape or cord around the shank of the forceps, and forming a loop into which the foot of the operator could rest, and by downward traction assist in the delivery. Poullet has modified and made more simple his use of the tapes, as shown in his most recent instruments. I applied the tapes, as first suggested by Poullet, to the Simpson forceps for the purpose of meeting the indications in those cases in which the occiput tends to rotate posteriorly, and in which the Simpson forceps applied to the sides of the pelvis seems most clearly indicated. The tapes have been similarly attached to the Davis forceps for cases in which that instrument seems most suitable; my experience leads me to prefer the Tarnier forceps in cases in which the instrument can be applied accurately to the sides of the head.

In using the forceps with the tapes no extra device for holding the instrument tightly upon the head is necessary. As traction is made, the tapes tend to draw the blades together; thus, in using the Simpson forceps, care should be exercised that the blades do not approach too closely.

In using either form of instrument, but moderate force is needed to effect delivery, provided axis-traction be made; the failure to perform axis-traction accounts for many of the difficult and dangerous cases of forceps delivery. The head should be kept thoroughly flexed during its exit from the genital tract; the use of axis-traction has largely done away with that function of the forceps said to favor rotation. No one would attempt to forcibly twist a vertex in the pelvis; the difference between traction in the axis of the pelvis and the attempt to deliver without such traction can never be appreciated without a practical experience with the two methods. The former is a difficult, tedious, and laborious task; the latter is a matter of much less difficulty. As illustrating the method of favoring rotation by axis-traction with the Simpson forceps the following case, reported originally in the first volume of the *Philadelphia Hospital Reports*, may be described:[1]

M. H., thirty-six years, an Irish domestic, unmarried, a unipara, was admitted to the hospital October 16, 1889, in a fairly good condition. While awaiting delivery, she suffered from numerous severe attacks of asthma, and was found to have emphysema, with some dilatation of the right ventricle. Examination of the heart revealed no valvular lesion, and examination of the urine showed an absence of albumin and of casts. For the relief of the asthma, grindelia robusta, potassium nitrite, and soda, with chloroform-inhalations, were employed. During the woman's stay in the obstetric ward her general condition did not improve, the attacks of asthma increasing in frequency, the patient becoming anæmic, irritable, and weak. About three weeks before labor, albumin in considerable amount was found in the urine, and about a week later the legs and feet became œdematous.

Labor began Tuesday, December 24, at 10:30 P.M., the patient reaching the Maternity ward at 10:30 P.M., December 25, 1889. At this time she was weak and irritable; she suffered from dyspepsia, and complained of pain in the back. The os was patulous to one finger; no presenting part could be felt, polyhydramnios being present; the uterine contractions were infrequent, of slight force, but caused great suffering. The first stage of labor lasted sixty-two hours, the general condition of things remaining much as described; the abdomen was enormously distended, tense, fluctuating; the fetal heart was distinctly heard low down in the right flank. The position of the fetus could not be made out by palpation. The patient became weaker, the pulse losing in volume and increasing in frequency to 115. At an early hour in the morning of December 28, the membranes ruptured, and a large amount of greenish liquor amnii escaped, but the head, which presented in the right occipito posterior position, prevented the escape of all. It was now found that the woman's bladder was full of urine, and catheterization was necessary. Still the head failed to descend through the pelvis, which was not markedly contracted, the measurements being: Spines, 23.5 cm.; iliac crests, 26.5 cm.; external conjugate, 18 cm.; right diagonal, 22 cm.; left diagonal, 21 cm.; trochanters 28.5 cm.; circumference, 85 cm.

The contractions of the uterus diminished in force, and at 12:30 P.M., December 28, the patient was anæsthetized with chloroform; Simpson's forceps, with the Poullet tapes attached, was applied, and the head delivered. The cord was wound twice around the neck. Delivery was difficult, consuming considerably over an hour; occiput remained posterior until just before delivery, when it quickly rotated forward. The grasp of the forceps was relaxed between the tractions to allow rotation. Double episiotomy was practiced and no considerable laceration occurred.

In bringing this paper to a conclusion, I desire first to draw attention to some errors that I think not uncommon in the treatment of these cases. Of primal importance in this report is the neglect

[1] Philadelphia Hospital Reports, vol. i, p. 229.

of the effort to measure the patient's pelvis when possible, and when this is not practicable to estimate the comparative sizes of the head of the child and the mother's birth-canal. In this the profession must educate its patients, and this can be done only if methods of examination are conducted without exposure, without violence, and in a kindly and skilful manner. It is my custom to teach students to examine the pelvis, diagnosticate the position of the child and its presentation, and ascertain whether the head is likely to enter the pelvis readily, while the patient remains covered with one thickness of linen. We can no longer comfort ourselves with the remark that American-born women rarely have contracted pelves; this statement is not strictly true, and the large number of foreigners coming to our country show frequent examples of varying degrees of pelvic malformation. The skilful obstetrician, by his knowledge, avoids prolonged and disastrous labors, and such good results are impossible without a skilful examination of the pregnant patient. If a large head be detected at the brim of the pelvis, scarcely able to enter, and showing a disposition to rotate posteriorly, it will be found better practice in many cases to perform the conservative Cæsarean section, saving the lives of mother and child, rather than subjecting the child's life to great risks and exposing the mother to serious injury in delivery.

I desire, secondly, to draw attention to the efficacy of posture in favoring rotation of the occiput when the head has entered the pelvis. Whether it be that the patient lies upon the side toward which the occiput is pointing, or whether she inclines the pelvis forwards, I am convinced from observation that posture is a valuable adjunct in the conduct of such cases. I desire also to criticise that method of examination consisting in the introduction of but a portion of one or two fingers in the effort to make an accurate diagnosis of the location of the occiput, and to favor its anterior turning. The practitioner should prepare himself to apply the forceps if necessary, and then anæsthetize his patient to obstetric anæsthesia, preferable with chloroform; he should introduce so much of the hand as may be necessary to make an accurate examination of the entire vertex. In the intervals between the pains he will be able to favor anterior rotation, and when he has thus brought the vertex in front of the middle of the pelvis, without removing the hand the forceps may be applied and the labor terminated.

Third. The forceps is often applied too soon, thus neglecting one important factor in anterior rotation, namely, the resistance of the pelvic floor. If the forceps be applied before the head has had an opportunity to rotate upon the pelvic floor, its posterior turning is often favored by the instrument rather than its anterior rotation. On the other hand, the forceps is often applied too late, when flexion has become impossible by reason of the persistence of partial extension, the head becoming impacted upon the pelvic floor in this unfavorable position. The life of the child has frequently been lost in such cases before the final effort at delivery is made, and when such is the case craniotomy is often the only rational procedure.

In conclusion, I would urge the following as points of importance: First, the adoption of the simple nomenclature already stated, which has borne the test of usage on the Continent of Europe, and which will render more comprehensible the mechanism of labor. I refer to the designation of two positions only for each presentation, anterior or posterior rotation being designated, as the case may be. Second, the importance of pelvimetry and of the comparative estimation of the sizes of the head and the pelvis is paramount; by the second of these I mean the careful estimation as to the degree of engagement of the head, and if the head has not engaged, pressing it gently into the pelvis by supra-pubic pressure, the patient being, if necessary, partially anæsthetized. Third, when the head is proportionate in size to the pelvis, and lingers upon the pelvic floor by reason of failure in expulsive force, the child's life and also the mother's safety being in danger, the forceps should invariably be used with axis-traction. The forceps should be used in accordance with the possibilities of the case, and that form of instrument should be selected that was intended for such possibilities. Whenever practicable, forceps designed to be so applied should be accurately placed upon the sides of the child's head, axis-traction made, the head and the forceps rotating together anteriorly. When such accurate apposition is impossible, forceps modelled for application to the sides of the pelvis should be employed with axis-traction, the forceps making as little pressure as possible upon the head, the blades being relaxed after each traction so that rotation anteriorly may occur between the blades. Fourth, a conservative Cæsarean section may be indicated if a living child, with large, firmly ossified head, presents with a posterior rotation of the occiput, the head failing to descend into the pelvic cavity; craniotomy may be indicated if such a child has perished during its entrance into the pelvis.

THE IMPORTANCE OF SURGICAL TREATMENT FOR LACERATION OF THE CERVIX UTERI.

Read in the Section of Obstetrics and Diseases of Women, at the Forty-third Annual Meeting of the American Medical Association, held in Detroit, Mich., June, 1892.

BY AUGUSTUS P. CLARKE, A.M., M.D.,
OF CAMBRIDGE, MASS.

The opportunities now afforded to the gynecologist for studying the effect in any case of laceration of the cervix uteri leave but little doubt that treatment is a most important subject for consideration. Experience has, however, demonstrated that the local application of the various agents which from time to time have been suggested as being remedial or beneficial is at best but a temporary expedient. Whenever a laceration occurring at the cervix extends through the internal and external muscular tissue, the mucous coat lining the canal suffers materially from the violence. The plicæ palmatæ which have been described under the term arbor-vitæ undergo serious disturbance in their relation to the other tissues with which they are connected. This condition often leads to congestion, thickening and to induration of the parts involved and to more or less hypertrophy and malnutrition of the higher uterine segments, and to changed relation and to displacement of the lower cervical zone. When laceration occurs at the cervix it is not only that the muscular and the mucous structures are injured but it is also that the mucous glands which so freely abound in

the uterine canal become disturbed in their normal functional activity. It is especially the cervix uteri about the arbor vitæ that the mucous follicles which when in a healthy condition afford only a moisture for the maintaining of their function, give rise to the formation of an altered, perverted or diseased secretion. The arteries and arterials entering into these structures often become preternaturally developed or enlarged; there will often be found a greater interlacing or anastomosing of these vascular structures. This condition may lead to more or less local œdema, which the venules and lymphatics will fail to overcome. The structure of the uterine nerves, particularly those derived from the hypogastric and sacral plexuses, become so deeply involved that not only the parts in immediate contact with the torn or injured surfaces become the source of much trouble but all the tissues forming the uterine body may continue so heavily congested and become so thickened, indurated and globular as to be recognized only as that condition which has so aptly been termed, subinvolution of the uterus.

The treatment best adopted for the relief of the suffering which occurs in every such case, according to my experience, is that afforded by surgical measures. The history of the following case illustrates in some measure the importance of such treatment.

Mrs. C., aged thirty-six years, descended from good stock, and was originally of sound constitution and in good health. Her embonpoint, though fair, was not excessive. She was a sextipara. The eldest child was eleven years old and the youngest three years. At the time I was first called, Dec. 14, 1891, there had been a most profuse uterine hæmorrhage. On my arrival I found that the patient was blanched; her pulse exceedingly weak and easily compressible. The cardiac sounds were feeble and gave indication that there was some dilatation and perhaps fatty degeneration of that organ. The patient had, for the most part, been regular in her catamenial flow, though she had suffered at times from unusual loss of blood. There was no evidence in the history of the case to show that the patient was suffering from the effects of abortion or that she was pregnant, or at any time had ever suffered from a miscarriage. A few days immediately preceding the date of my attendance she had been doing some extra household work and had attempted to lift some heavy articles of furniture. This may have been the exciting cause of the hæmorrhage. Vaginal examination revealed that the cervix was patulous, that it was hard and unyielding, and that multiple cervical laceration had evidently long existed. There was also an old perineal laceration which might have contributed somewhat to her inconvenience. By tamponading with iodoform gauze, the hæmorrhage was brought under immediate control. Next day a thorough vaginal examination showed that there was subinvolution; the depth of the uterine cavity was six and a half inches; there was also cicatricial ectropium of the cervix to an unusual degree. For some days the use of the tampons was continued, though there was no further hæmorrhage. The patient subsequently suffered severely from facial and super-orbital neuralgia, sometimes on the left side, and at other times on the right. The patient also suffered from sciatica appearing on the right side; the occurrence of this affection had, from time to time, heretofore added much to her illness. Full and repeated doses of morphia and of other opiates often afforded her marked relief; stimulants were well borne and were frequently required to overcome the narcotic effect of the soporifics.

Dec. 22.—The patient suffered from a severe attack of gastralgia, which yielded only to morphia hypodermatically administered. Under careful regulation of diet, and with the judicious use of stimulants the patient from this time forward gradually improved, though she was kept in bed in consequence of the local inconvenience from which she suffered every time she stood or was in the erect position.

Feb. 3.—With the assistance of Dr. A. H. Tuttle, the patient was etherized and placed on the table for surgical treatment. All details of the operation were carried on under strict antiseptic precautions. The uterine cavity still measured six and one half inches. This was first curetted; after this the cervix was repaired. Aseptic animal sutures were employed. The mucous tissue of the lacerated perineum was then dissected up as far as the sulcus on each side; coaptation of the torn surfaces of the perineal tissue was effected by the employment of the same kind of aseptic animal suture. The deep sutures were first inserted; each tissue was brought together in its proper order, last of all the edges were brought together by the buried suture and the parts united were sealed with collodium and iodoform. The whole was protected by dressings to the cervical, vaginal and perineal tissues. The patient rallied well from the ether, though more than the average quantity had to be used to overcome all rigidity of the genital tract. The bladder was catheterized at regular intervals to prevent the repaired tissues from becoming contaminated by the discharge of the urine. The patient suffered very little from the effects of the operation; there was no increase of temperature. She experienced some trouble from a return of sciatica, though this occurred on the left instead of the right side. Neuralgia occurring in the face and in other parts was at intervals complained of. She took nourishment and stimulants freely until the evening of the twelfth of February, when she began to suffer from dyspnœa; the pulse at that time became irregular, and the heart's action at intervals was labored. Though the patient was able to continue the use of nourishment and stimulants she died during the evening of the fourteenth. Autopsy twelve hours after death.

On opening the chest the heart was found to have undergone more or less fatty degeneration; both ventricles were somewhat dilated. The left ventricle contained an antemortem clot. The lungs were congested. The liver gave indication that it was undergoing also fatty degeneration; the spleen, however, was normal. The right kidney was congested and was darker than normal; the left one showed that marked organic changes had for some time been going on, and that it was approaching to a condition of parenchymatous inflammation. At the cervix uteri, where the lacerated tissue had been brought together by the operation for repair, the parts were in a healthy condition; the line of union had nearly healed. The uterine canal also presented a healthy surface; it showed that all the fungoid granulations had been removed by the curetting. The uterus showed that there had taken place a rapid retrograde metamorphosis of tissue, for the canal itself measured now scarcely four inches in depth. There had already taken place a strong line of union at the coapted parts in the torn perineum. There was no indication, about the parts, that any sepsis had occurred. The autopsy, which had been carefully conducted, did not give the slightest indication that there had been any septicæmia or that other morbid process had occurred as the result of the surgical measures undertaken for the patient's relief. The autopsy further showed that there was no pelvic or uterine tumor and nothing to indicate the existence of a cancerous development, though such had been believed to have existed by some of her previous medical advisors.

In view of all the facts connected with the case it seems fair to conclude that the cause of the death was owing to the excessive loss of blood which occurred immediately previous to my first visit. This loss of blood necessitating the horizontal position which had to be so long assumed must have hastened the degenerative changes that had before been insidiously developing. It is also fair to infer that had the operation for her relief been instituted before the lapse of so many years, during which she had suffered from hæmorrhage and from other untoward symptoms, her life might have continued a much longer duration. In another case of cervical laceration occurring during labor the patient suffered much from endocervicitis and from uterine hæmorrhage. After coming under my care she had intended to submit to an operation but had delayed the matter owing to a succession of cases of illness that appeared in her family. The patient suffered much from the subinvolution and from the local inconvenience whenever she travelled or was about her house. She had grown stout, but her flesh was soft from a lax habit of the body. Auscultation revealed that though there was no distinct cardiac murmur the

two sounds were weak and that dilatation and fatty degeneration had begun to take place. Another severe uterine hæmorrhage so prostrated her that she had to be confined for some weeks to her bed. She suddenly died from degenerative changes occurring in the cardiac tissue. In this case there can be no doubt that had surgical measures been adopted for her relief before she had sustained so much loss of blood, the fatty degeneration of the heart's structure would not have been accelerated by the influences of the recumbent position which she also, from time to time, was frequently enforced to take. In cases in which the disturbance is greatest at the cervix uteri operation for repair will often yield most favorable results. In such cases it is surprising to see how speedily the thick and indurated tissue at the cervix softens and relaxes under the influence of the stimulus imparted by operative interference. The venules and lymph vessels which seemingly, had long since lost or suspended their function, take on an almost immediately, for effecting this accomplishment, renewed activity. In a case of cervical laceration to which I was recently called, there was but little that could be expected to be achieved by the adoption of surgical measures on account of the unusual hypertrophy of the tissues, which had taken place, and also on account of the exhausted condition of the patient. The operation however, was undertaken. I was happily surprised to find that I had succeeded in effecting so much toward the reduction of the induration and toward bringing about restoration of the cervix. In cases of cervical laceration before the structures become indurated or cicatrized the ectropium or eversion of the tissues of the os uteri may be the chief indication for which surgical treatment is required. Eversion, when present to any great extent, almost always gives rise to much local suffering, especially whenever the patient assumes the erect position. Such a condition of the cervix is sometimes the cause of sterility; it often interrupts the marital relation. In a case to which I was called in consultation some two and a half years ago the tissues of the os uteri so projected forward as to give the impression to the medical attendant, when the examination was made without the help of the speculum, that a fœtus at the term of four months or more, had engaged the cervical canal. This patient had been the mother of four children, during the birth of the last of which laceration of the cervix occurred. As a consequence of this injury, repeated hæmorrhage had been a troublesome factor; this had often come on without apparent connection with the influence of the catamenial flow. This case under temporizing treatment had dragged on for upwards of three years. A resort to trachelorrhaphy was followed with marked amelioration. Emmet, as it is well known, long since expressed his belief that nearly all cases of uterine epithelioma or cauliflower growth have their exciting cause or origin in laceration of the cervix uteri. The cancerous development according to Emmet, arises from prevented nutrition in nature's attempt to repair the injury.

Professor Graily Hewitt, of London, and other eminent authors have expressed their opinion that injury to the cervix by labor, is the predisposing cause of uterine cancer. In a case which has recently come under my care the history showed that there had been a cervical laceration dating back some ten years. The patient's age was forty-six years; she was a multipara. There had been considerable induration and eversion. Nothing from the history could be learned that cancer had ever appeared in her family. The patient,for several months previous to the manifestation of cancer in the cervix uteri, had dwelt in a family in which two cases of cancerous disease had occurred. In another case to which I was called, the patient was a primipara; her age was twenty-nine years. There was no evidence that malignant disease in either branch of her family was hereditary or that in either of them a case of such disease had ever appeared. One year before she had experienced the initial symptoms of cancer of the cervix she had devoted much time in the care of a friend who was suffering from cancer of the breast. She had incurred a cervical laceration during the labor which took place five years before. She experienced considerable inconvenience from the effects of the laceration, and had from time to time received local treatment; no operation, however, for repair of the cervix was ever undertakon. In many cases of laceration of the cervix induration that takes place is limited to an exceedingly small section; the eversion may give but little trouble. In such cases there may have been no arrest of the action of the absorbents that are engaged in the removal of the provisional material incident to pregnancy. In some cases of this class, it would seem that the occurrence of laceration increases the activity of the absorbents, or at least helps to expose them to the agency of the materies morbi or to that of the disease germs, which at any time may gain admission into the vaginal introitus. As more evidence has of late been adduced tending to show that cancer in its various manifestations is a contagious[1] affection a much stronger plea than heretofore, can now be offered in support of the advantages to be derived by the resort to the operation for repair of the cervix in which laceration has occurred, though it be of a minor grade.

THF MANAGEMENT OF CANCER OF THE UTERUS, COMPLICATED BY PREGNANCY, WITH REPORT OF A CASE.

Read in the Section of Obstetrics and Diseases of Women, at the Forty-third Annual meeting of the American Medical Association, held at Detroit, June, 1892.

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Pregnancy and uterine cancer are conditions, fortunately, rarely associated. Winckel saw eight cases of cancer of the cervix uteri in a total of fifteen thousand cases of pregnancy. Stratz saw twelve in seventeen thousand nine hundred cases. Sutugin saw two in nine thousand, or, in other words, out of nearly forty-two thousand cases of pregnancies, observed in three great obstetric clinics, only twenty-two cases of cancer of the uterus occurred as a complication, roughly, one case in every two thousand cases of pregnancy. Like all statistics these have only a relative value. Consulting obstetricians see relatively more cases than do general practitioners, and apparently see as diverse results of treatment. For example, the much-to-be-lamented late Dr. For-

[1] Observations of M. Guelliot and M. Arnaudet. *L' Union Medicale, 1891.*

dyce Barker reports, in a discussion, three cases which were delivered, without any unusual complications, of living children at term, the mothers also recovering from childbed without serious drawbacks. Other obstetricians of equal skill have seen this complication followed time after time by death of the mother, undelivered. Naturally, from their own experiences, these gentlemen cannot come very closely together in discussing methods of treatment.

If we take a wider view of cancer of the uterus and pregnancy, with regard to the mother, out of twenty-seven cases seen by Puchett, five died during labor undelivered, nine shortly after delivery, ten recovered from the effects of labor, and in three the results are not stated. Leaving out of consideration the three cases in which the results were not known, we have a maternal mortality, from the delivery, of fifty-eight per cent. plus.

Cohnstein in another considerable series of cases, where gestation was completed before labor occurred, found an average maternal mortality of 57 per cent. Hermann out of one hundred and eighty cases found a maternal mortality of 40 per cent., and that 20 per cent. of these died before delivery took place. To consider the subject more accurately, from this large number of cases, out of nearly three hundred women suffering from cancer of the uterus, and in labor at the end of gestation, 52 per cent. died undelivered or never left their beds. Hermann also showed a maternal mortality of 31 per cent. where the labor was practically normal. According to Gusserau and Cohnstein, abortion or premature labor occurs in 35 per cent. of pregnant women with cancer of the uterus. The maternal mortality is not materially lessened by abortion and premature delivery. If we go a little farther in our analysis of this frightful mortality, we find, first of all, that 25 per cent. died undelivered from septic infection brought about by a putrid fœtus or from shock and exhaustion. Sepsis after delivery of the fœtus, from absorption through large areas of unhealthy and non-cicatrizing granulations, or from retained placenta, is responsible for another large proportion of the deaths. Post partum hæmorrhage another portion, and rupture of the uterus still another. Yet with all these dangers menacing the mother's life, by this complication of pregnancy, we still have another, i.e., the stimulus of unusual uterine blood supply to the cancerous mass, encouraging rapid cell proliferation and infiltration of the vagina, broad ligaments and rectum. Finally, few of the majority who survive the ordeal of delivery live three months.

For the children are the conditions less favorable? Of the above series of cases only 33 per cent. were born living, and hardly 20 per cent. lived until the mother left the childbed. Here then we have 20 per cent. of living children at the threshold of their existence and over half without mothers.

I know of no condition of disease that presents a darker or sadder image than does this one. An image rarely seen to be sure, yet none the less frightful, an image that has not, it is to be feared, received the attention in text-books and from teachers of obstetrics and medicine that its moment deserves. I have tried to outline fairly the course that cancer of the uterus, when complicated with pregnancy, has taken in the past, in order that we may come to a clearer conception of our duty to these cases in the future. If the foregoing shows anything, to my mind, it shows that we cannot afford to wait for emergencies, delivery, abortion, and septic infection to arise, if we ever expect to reduce the mortality of this dreaded condition.

If the gentlemen of this Section were called upon to state their individual preference for the treatment of operative cases of cancer of the cervix uteri in two words, I am confident that the larger number of replies would be vaginal hysterectomy, rather than high amputation, total extirpation, or partial excision. It is pertinent to ask why shall the principles of treatment be modified because pregnancy exists? I hold that unless exceptional circumstances are present that total extirpation should be the rule, and the operation should be done at the earliest moment.

Cases of cancer of the cervix uteri, associated with pregnancy, so far as treatment is concerned, may be classified in three series.

1. Cases where the disease is confined to the uterine tissue, no infiltration in vagina, bladder, rectum or broad ligaments, and the uterus has not reached a size incompatible with vaginal hysterectomy, say up to the end of the fourth month of pregnancy.

2. This series comprises all cases presenting the features of the first series, except that the removal of the uterus by vaginal hysterectomy, because of the late period of gestation, after the beginning of the fifth month, is precluded.

3. This series comprises all cases at any period of gestation where total extirpation of the uterus is impracticable.

In the management of the first class of cases, associated with early pregnancy, abortion, either accidental or induced, has already been shown to be surrounded by many dangers, and notwithstanding its successful employment by a few operators, as a preliminary to vaginal hysterectomy, it is not a procedure to be recommended.

High amputation of the cervix in these cases, in the majority, brings about abortion and its attendant dangers, and is even less successful than in the non-puerperal uterus, in regard to final cure.

Allow me to illustrate to you by the following case from my own practice the management of a case of the first group:

Mrs. A. H., aged 27 years, native of United States, housewife by occupation. Referred to me by Dr. A. V. H. Smythe, of Amsterdam, N. Y. Admitted into Albany Hospital Sept. 23, 1890.

Family history: mother died in childbirth; father, brother and three sisters living and in good health. Personal history: menstruated at the age of 13; married at 15; first child born ten years ago, second seven, and third five years ago, with one miscarriage between second and third child. About one year ago patient noticed some abnormal condition of menstruation, in that it was more frequent and profuse. This condition has constantly grown worse. Has had a very intelligent line of treatment given her, but without relief. Has some lancinating pain through pelvis, has lost in flesh, is anæmic, does not rest well, appetite feeble and realizes that she is gradually growing weaker. About two and one half months ago she was confined to her bed for three weeks, owing to her great exhaustion. Patient has always done hard, manual work, and connects her trouble with the especially severe tax upon her strength. Dr. Smythe sent her to me with the diagnosis of carcinoma of the cervix. He tried, and made various applications to the growth, but without any substantial control of the hæmorrhage, and with a constantly increasing development of the disease.

On examination I found a cauliflower-like excrescence protruding very uniformly from the anterior two-thirds of the cervix, coming out, as it were, from a bi-lateral laceration, not particularly sensitive to the touch, but having a hard, indurated base. Pelvis apparently in a healthy con

dition, and no infiltration of the vaginal walls. She stated that for the past three months she had flowed almost constantly, accompanied by a very nasty odor. Bi-manual examination disclosed a uniform enlargement of the body of the uterus, to the size of a small orange, and believed to be an advance of the disease to the fundus. When asked as to the possibility of her being pregnant she did not think it possible. Was not nauseated in the same manner as with her other children, had no pain in her breasts, nor in any way did she have the symptoms of her previous pregnancies. I felt that I was justified in endorsing the doctor's diagnosis, with the possibility of her being pregnant, and recommended most earnestly a vaginal hysterectomy. This the patient, on explanation, was anxious to have done, in which conclusion her husband readily consented.

Operation was performed September 30, 1890. Was in no way complicated until I had liberated the uterus quite entirely when I found it was even somewhat larger than I had mapped out in the previous bi-manual examination. On examining the specimen after removal, the whole cervix was found implicated in the growth, and the body of the uterus contained a fœtus of about two and one-half months; ovaries and appendages were not removed. Patient made an uninterrupted recovery with the exception of an abscess that formed somewhere in the stump and was detected October 2, opened, and glass drainage tube introduced, parts thoroughly washed, some slough removed; discharge quite offensive for two or three days, when she went on to a rapid recovery.

I cannot but believe that the sloughs and the offensive discharge were the result of the use of the forceps, the latter being used instead of ligatures in the operation. This patient has remained in perfect health since her recovery, is able to do her housework, is bright and cheerful, and in every way quite happy; husband is loyal and contented.

The specimen was referred to Dr. W. G. MacDonald who has kindly furnished me with the following microscopical report. I wish also to state here that I am greatly indebted to him for the statistics contained in this paper.

"The specimen furnished for examination was a pregnant uterus removed with its contents by vaginal hysterectomy. An incision in the long axis showed the uterine contents. The entire preparation had been hardened in alcohol. The entire cervix is envolved in tissue distinctly harder than normal. The os uteri and inferior portion of the cervix is completely replaced by a soft, spongy growth resembling cauliflower. Portions of this growth were further hardened, stained and examined. The sections presented a distinct alveolar, or, more accurately, tubular structure, with abundant small-celled infiltration, especially in the periphery of the growth. With higher amplifications these alveoli or tubules show that they are closely packed with epithelial elements, chiefly columnar in character. The cellular infiltration resembles closely that seen in scirrhus of the breast. From the foregoing the pathological diagnosis is that of adeno-carcinoma of the cervix uteri."

The points of interest in this operation seem to be as follows: She had irregular menstruation, hæmorrhage, as it were, for over a year, yet when the disease must have been pretty well advanced she became pregnant. Was this a case in which the fœtus would have gone on to full time and could then have been delivered by abdominal section, and what would have been her chances as regards the development of the growth? Would it not have placed her among the hopeless cases, with the vaginal walls implicated and the pelvic glands also infiltrated? I would not hesitate in recommending the same line of treatment to another patient similarly situated. The favorable termination of this case has been especially gratifying to me. From the history of the case, and other similar ones operated upon, it will be seen that one of the chief difficulties lies in the uncertainty of diagnosis. An absolute diagnosis of pregnancy can be made in only very exceptional cases before the fourth month, when the condition complicates pregnancy. Before that time the uterine enlargement will most often be attributed to invasion of the fundus by the new growth.

The technique of the operation, owing to a degree of laxity of the tissues associated with pregnancy, is not made seriously embarrassing.

Antro- or retroversion of the uterus may be made either difficult or impossible in consequence of the volume of the uterus. The placing of ligatures on the broad ligaments may be impossible before the removal of the uterus from lack of room, but clamps may be employed either temporarily or permanently. Greig Smith, who always employs clamps, thinks that the operation is made easier when complicated by an early pregnancy.

There have been, including this one, sixteen cases of vaginal hysterectomies for cancer of the cervix uteri, complicated by an early pregnancy, *i. e.*, before the end of the fourth month, in which the mortality is *nil*. These operations have been distributed among a large number of operators, Landau, Kaltenbach, Hofmeier, J. Greig Smith, Taylor, Korn, Jonas, Mary A. Smith and others. Jonas employed a modification in first inducing abortion, and in a few days proceeding to hysterectomy, but complications reported by him, and reasons already given, do not encourage this method of practice.

The management of the second series, operative cases of cancer where pregnancy has so far advanced that vaginal hysterectomy is precluded, by the volume of the uterus, presents many problems for our consideration. Some of these present peculiar features in individual cases. For example, a woman with no living children presents herself for treatment at the end of the seventh month of gestation, for cancer of the cervix uteri. She is anxious to have a living child. Shall we follow the rule of surgery, cancer once diagnosticated, immediate operation, or shall we wait, keeping the case under observation, until gestation is completed? Knowing the rapidity with which carcinoma infiltrates, under the stimulus of pregnancy, delay may place the mother beyond relief. Operation destroys the child. Undoubtedly some of these cases may be safely tided over until delivery per vaginum can be accomplished or a Porro operation done at term, followed by extirpation of the stump.

The management of carcinoma of the cervix, associated with late pregnancy, after viability, and where the new growth is rapidly proliferating, will require, as a rule, the total extirpation of the uterus, by the method of Freund, as modified by Tweifel. First, a Porro operation, treating the pedicle by an elastic ligature and dropping it, to be followed by an immediate vaginal extirpation of the stump. Here, perhaps, the early operation may prejudice the chances of living in the child, but they certainly increase very materially the chances of ultimate recovery of the mother.

The third group of cases of cancer of the uterus, inoperable ones, will necessarily be seen very infrequently. Here more latitude may be allowed and the interests of the mother may be sacrificed in a

degree for those of the child. Seldom will active interference be demanded unless from feebleness of the fœtal heart sound, or feeble movements showing that the fœtus is not doing well. At term the chances of delivery of a living child should be carefully considered, either naturally or by the aid of forceps. When delivery presents great difficulties, or seems impossible, the Porro operation seems indicated above all others, and may present advantages even if the child is dead.

Briefly the treatment of carcinoma of the uterus may be summarized as follows:

In all operable cases where the pregnancy is not advanced beyond the fourth month, do a vaginal hysterectomy at once. In all operable cases between the fourth month and term, as a rule, complete extirpation of the uterus by Freund's method, as modified by Tweifel, and in inoperable cases delivery at term or a supravaginal hysterectomy of the pregnant uterus, Porro's operation.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopædic Surgery.

Stated Meeting May 20, 1892.

HENRY LING TAYLOR, M.D., CHAIRMAN.

CONGENITAL DISLOCATION OF BOTH PATELLÆ.

Dr. S. Ketch presented a little girl who, at first glance, seemed to have only knock-knee, but on flexing the limbs, a complete dislocation of the patella downwards and forwards was observed, and the dislocation could be readily reduced by extending the limb. The deformity was much more marked on the right side. The condition was probably congenital, although it had not been noticed by the mother until recently, as the child was able to walk with no more difficulty than is observed in an ordinary case of knock-knee. Dr. Shaffer had suggested that this was the opposite of the condition which he had described under the head of elongation of the ligamentum patellæ at the last meeting of the American Orthopedic Association.

Dr. John Ridlon said that he had seen three such cases in the practice of the late Dr. Thomas. The treatment had consisted in hammering the deficient condyle with an egg-shaped wooden mallet, and in two of the cases, the treatment had already effected sufficient development to prevent dislocation, and in the other case the treatment had only been just begun.

Dr. W. R. Townsend said that he had presented some time ago to the Surgical Section of the Academy of Medicine a colored girl who could, by muscular action, produce at will a complete dislocation of both patellæ, either to the outer or the inner side. A knee-cap was applied, and an effort made to restrict the movements of the fibres of the vastus externus and internus which seemed to be abnormally developed. She was kept under observation for six or eight months, and at the end of this time, she could not produce the dislocation at will, and the dislocation occurred quite infrequently.

Dr. N. M. Shaffer said that in his case of elongated ligamentum patellæ, the man had had a fall, which was followed by an outward dislocation of the patella on the right side. After consultation with several other surgeons, in view of the fact that the inter-condyloid notch was filled by an exostosis, it was considered best to make no attempt at reduction, and at present, although the patella lies on the outer aspect of the joint, the man is perfectly able to walk ten or fifteen miles a day. In the case just presented, he did not think the external condyle was deficient, but the ligamentum patellæ was so short that the patella, instead of passing over the trochlea, is drawn down to a point where, owing to the knock-knee, it is very easily dislocated. On this account, he thought that treatment directed towards securing an elongation of the ligament would be more apt to prove successful, than simply hammering the outer condyle.

Dr. Ketch in closing the discussion, said that he agreed with the last speaker as to the inadvisability of resorting to operative measures. Not long ago he had seen a young lady with a somewhat similar condition. Twelve years before the patella had been dislocated by muscular action, and this had again occurred shortly before he saw her. Reduction was easily affected by extending the limb.

Dr. Royal Whitman presented several patients.

Case 1.—A girl, fourteen years of age, to illustrate the appearances in non-deforming club foot. As in many similar cases, the history was one of awkwardness in walking for many years, with increased pain and discomfort during the past six months. She presented the calluses on the balls of the feet, the contraction and tenderness of the plantar fascia, and the limitation of dorsal flexion to which Dr. Shaffer had called attention in his original communication.

Case 2.—A woman, fifty-seven years of age, who had suffered from chronic rheumatism for many years. On the left side the contraction of the plantar fascia had thrown the foot into a position of equino-varus. There was no deformity of the right foot, but on both sides, a well marked limitation of dorsal flexion. The electrical reactions were normal. The condition was similar to non-deforming club foot, and was apparently the result of a rheumatic inflammation.

Case 3.—A girl of fourteen, with marked spasmodic flat foot. The case was presented to illustrate the extreme and progressive deformity and disability in this class of cases which could be easily and quickly relieved by the method of treatment to which he had on several occasions called the attention of the Society.

Case 4.—A girl of eighteen with persistent abduction of the right foot. Although there was no evident deformity, the foot was held in an abducted position by spasm of the peroneii and extensor longus digitorum muscles. The condition was the result of a slight sprain three months before. The symptoms were pain, fatigue and insecurity in walking. The case illustrated the condition in so-called chronic sprain of the ankle, which practically never recovered, because the foot being unbalanced by irregular muscular action, was constantly subjected to injury. When the condition was recognized, a cure could easily be accomplished by restoring the normal muscular action. The patient being etherized, the foot should be forced into a position of extreme equino-varus. All adhesions were thus broken up, and the contracted muscles were stretched. The foot was then placed in plaster of Paris, and later, by massage, exercises, and a temporary support, the patient could be completely and permanently cured.

Dr. R. H. Sayre thought that in the fourth case there might have been a fracture of the lower part of the fibula, complicating the sprain, which had been overlooked in the treatment of the case immediately after the injury.

Dr. Ketch thought that the fourth case gave evidence of a possible osteitis about the ankle joint, and this condition should be carefully excluded before adopting the treatment proposed.

Dr. Whitman said that he found no indications of an osteitis in the fourth case, and that there was no history or present indication of fracture complicating the original sprain.

Dr. Shaffer said of the second case, that the exaggerated extension of the toes, and the shortened plantar tissues were characteristic of non-deforming club foot. He had seen several cases where the symptoms had not become prominent until the age of thirty-five or forty years was reached, and then, whether there was a rheumatic diathesis or not, all the symptoms would be greatly exaggerated. Many cases showed much less deformity than that exhibited in

Dr. Whitman's case. The typical non-deforming club foot showed little or no deformity as such, unless it was sought for and found in the shortened plantar and post-tibial tissues. The lack of proper length prevents normal antero-posterior movement at the ankle, and in the tarsal joints, and the entire weight of the body falls upon the "ball of the foot" in locomotion. It is far more common than is generally supposed, and with the use of the antero-posterior traction shoe, there is no necessity whatever for a division of the resisting tissues.

Dr. R. H. Sayre thought the second case presented very much the condition found in ordinary cases of chronic gout and rheumatism, and he had noticed that after the foot had been manipulated somewhat, she was able to move it much better than before, and could voluntarily flex the ankle beyond a right angle, so that it did not seem to be a case of non-deforming club foot.

ANKYLOSIS OF THE HIP.

Dr. Irving S. Haynes, present by invitation, exhibited a specimen of this condition, which he had found in the dissecting room of the University Medical College. The subject was a man about twenty-five or thirty years of age. The limb was slightly flexed, abducted, and rotated inwards. A sinus opened about half an inch below Poupart's ligament, and one inch internal to the anterior superior spinous process. It passed backwards, soon divided into two tracts, one leading down to the front of the great trochanter, the other up under Poupart's ligament into the iliacus, and then into the obturator internus muscles; then around the middle of the outer border of the obturator foramen into the cotyloid notch, and so into the hip joint. The iliacus and obturator muscles, as well as all the muscles acting upon the hip joint had undergone extensive absorption, and fibrous degeneration. The center of the disease, and the starting point, seemed to have been in the head of the femur, but there was also a focus in the epiphyseal line of the great trochanter, which communicated with that found in the head of the femur by a sinus running through the neck, and also opened in front through one or two small openings. Another sinus seemed to have led from the acetabulum through the cancellous portion of the ilium into the iliac fossa, where the opening was surrounded by bony formations. Between the ilium and sacrum there was slight mobility of a gliding nature, which the speaker had never observed before, and which was probably intended to partially compensate for the lack of motion at the hip. There was no evidence of the disease in the capsule of the joint. The abscess cavities were limited to the absorbed portions of the iliacus and obturator internus muscles.

ARTHRITIS DEFORMANS.

Dr. Haynes also exhibited a specimen of this condition, showing erosion and reproduction of bone, with a depression in the acetabulum, and a disappearance of the ligamentum teres. The motions of the joint were slightly limited in every direction. The specimen was removed from an old subject.

THE TREATMENT OF LARGE ABSCESSES IN POTT'S DISEASE.

Dr. W. O. Plimpton presented several cases of Pott's disease with large abscesses as an illustration of the treatment which he advocated. He did not favor aspiration, because he thought after this had been done, the abscesses were likely to continue to enlarge and burrow into the tissues. While admitting that abscesses were not infrequently absorbed, he wished to deprecate the let-alone treatment of large abscesses which tend to burrow deeply into the tissues, threatening to inoculate these tissues, often causing mechanical deformities of other parts.

The first case was a boy about 12 years of age, who had had Pott's disease since he was 3 years old. The disease followed closely upon a blow from a brick. When he first came under the speaker's care last July, he was very anæmic and weak, with an afternoon rise of temperature. There was a very large abscess situated beneath the glutei muscles, and there was much deformity of the leg, viz.: apparent shortening, inward rotation, and adduction, caused by the abscess. Free incision evacuated a large quantity of fluid, together with broken down tissue. An examination with the finger showed no involvement of the joint. The diseased parts were thoroughly curetted with a Volkmann spoon, a counter-opening made and three drainage tubes inserted. After washing out the cavity with a weak bichloride solution, the superficial cavity was obliterated as far as possible by means of sutures, and primary union occurred except at the site of the drainage tubes. Two of the tubes were gradually withdrawn. The third one, in front, still remains in for drainage, although it has been considerably shortened. The apparent inequality in the length of the limbs has disappeared since the operation, and with a plaster jacket to support the spine, he is able to go to school, and to play with other children. The discharge is steadily becoming less.

The second case was a girl, 7 years old, whose disease dates back to a fall about three years ago. When first seen one year ago last January, there was a moderately large abscess, which was opened, and a tube 6 or 8 inches long inserted. The tube has been gradually shortened until it is now 3 inches long; the discharge is diminishing, and the patient's general health has markedly improved. Another case was treated in a similar manner, and has steadily improved since the operation. In all, there had been a gradual reduction of the temperature after the operation. The same precautions are observed as in any cutting operation where it is the intention of the surgeon to secure primary union, and after the operation, care was taken to keep the wound and dressings aseptic.

Dr. W. R. Townsend said that the location of the tube in the first case reminded him of an accident which occurred about one year ago. He was hastily summoned to the hospital on account of one of the patient's having a hæmorrhage. He found that a case of large psoas abscess which had been opened and a drainage tube inserted, three weeks before, had suddenly begun to bleed profusely. The hæmorrhage was arterial, and with the assistance of Dr. W. T. Bull, he cut down and found that the pressure of the drainage tube had caused a large perforation in the femoral artery. He accordingly tied the artery above and below the perforation, and the child recovered without further accident.

Dr. Ketch thought the cases presented very much the appearance of those which he had seen in the hospital when it was the rule to open all abscesses as soon as the abscess approached the surface. They did not seem to him to differ materially in their course from those where the abscess was allowed to open spontaneously, and he could not see that anything had been gained by this method of treatment.

Dr. Ridlon asked if the drainage tube had been left in for so long a time for fear that the opening would close up, and necessitate another operation. He had always thought that it was not necessary to leave in the tube more than a few days.

Dr. A. M. Phelps thought that the second case had had a decided advantage over the first in being subjected to the operation at a much earlier stage. The slightest increase in an abscess, in his opinion, warranted prompt incision. He spoke emphatically because the Section had almost been committed to the idea that it was better for these abscesses to take care of themselves. But it must not be forgotten that these abscesses were originally collections of tuberculous material and that when they become infected with

pyogenic germs, as almost inevitably occurs, there will be a rapid burrowing of the pus. Another reason for opening these abscesses is that they exert an injurious effect by the internal pressure of the exudate upon the carious foci in the diseased vertebræ, keeping them bathed constantly, and furnishing a fertile source of the subsequent breaking down of these vertebræ, and of a consequent increase in the deformity.

Dr. Ketch thought that the previous speaker had not correctly stated the position of the Section on this subject. He thought it would be more correct to say that they took the ground that so many of these abscesses disappeared spontaneously under proper mechanical treatment, that something more than mere accident was necessary to explain it, and that these collections of pus cause injurious pressure had not been proven. The proof of this would be found in a marked increase in the size of the deformity, but in disease of the dorso-lumbar spine, where these abscesses were the most frequent, this did not occur, and Dr. Myers had recently presented a boy who had had two large iliac abscesses disappear spontaneously, and yet there had been no increase in the kyphos, as shown by repeated and careful tracings.

Dr. Shaffer said that extensive observation had taught him that with efficient mechanical treatment, the abscesses of Pott's disease almost uniformly pursue a benign course, and he believed that the time would come when those who now operate will see their error. He had seen in the practice of some of the best surgeons in this city, deaths occur after operating upon just such abscesses. When an abscess is very tense, and there are severe local or constitutional symptoms, all recognize the propriety of incision, but ordinarily, these abscesses are flaccid, and do not cause any such "damming up" and injurious pressure as had been described by Dr. Phelps.

Dr. Whitman could see no good reason for waiting until the abscesses appeared below Poupart's ligament. When first discovered, they should be aspirated, and if this fails, iodoform emulsion should be injected. Surely a method of treating the abscesses of Pott's disease which yielded in the hands of Bruns fifty successful cases out of fifty-two, and of Fraenkel, eighteen out of twenty, was one which deserved a fair trial before resorting to severer measures. If aspiration and the injection of iodoform emulsion proved unsuccessful, the method of evacuation recommended by Barker and Treves, with immediate closure of the wound, might be employed before resorting to open drainage.

Dr. Plimpton, in closing the discussion, said that the tube had been left in for free drainage, as it had been found that where it was removed shortly after operation, the exuberant granulations choked up the sinus, and gave rise to a great deal more trouble and discomfort than where the tube was retained. At the time of the operation, he had in mind the possibility of accident from having the tube in too close proximity to the femoral artery, and in this particular case there were dense cicatricial barriers between the tube and the artery. Small and not readily accessible abscesses should not be interfered with unless they cause some disturbance, but he would not hesitate, if circumstances seemed to demand it, to open them above Poupart's ligament. The existence of intra-abscess pressure and its effect upon the general health, was well demonstrated in one case in which he removed about half a pint of the contents of the abscess by aspiration, with the result of causing an immediate return of the child's appetite, and a prompt relief of his pain. He had seen the iodoform emulsion used in a number of instances without apparent benefit. In considering the percentage of abscesses which disappear spontaneously, it must be remembered that many of them are small abscesses, or are nothing but fluid in the joint, so that the statistics on this point were very defective.

Dr. L. W. Hubbard read a paper entitled "A Contribution to the Study of Non-deforming Club Foot."

Dr. Phelps objected to the name "non-deforming club foot," on the ground that all cases he had seen presented deformity.

Dr. Shaffer said that when he first called the attention of the profession to this subject, this name had suggested itself to him because all the conditions of club foot were present except the deformity, which was so slight that it had hitherto escaped observation.

Dr. V. P. Gibney said that the condition described some years ago under the name metatarsalgia might be confounded with non-deforming club foot. These patients usually complain of pain after sitting for some time, as in the theatre. He had treated a few cases of non-deforming club foot by division of the tendon and plantar fascia, over-correction, and retention in this position by plaster of Paris for a period of several weeks, and he had not been obliged to resort to extension subsequently. So far as he knew, these cases had not relapsed.

Dr. Shaffer said that in a series of twenty-two cases of metatarsalgia, he had relieved over one-half by the antero-posterior traction shoe alone. The inability to flex the ankle joint brought the maximum pressure at the point of irritation, and hence, by producing a certain amount of forcible flexion at the ankle joint, the pressure was brought upon other parts, thus removing the constant irritation which he thought was the chief etiological factor. He had permanenfly and completely relieved marked cases of non-deforming club foot within one week by three or four applications of his traction apparatus. In some cases, deformity can be reduced at one sitting, but the muscles re-contract slightly, necessitating a more prolonged treatment. He did not believe that tenotomy was necessary in any case of non-deforming club foot.

Dr. R. H. Sayre had found many cases of metatarsalgia to be dependent upon irritation of the pelvic nerves, and such cases had been relieved by galvanism with one pole over the sacrum, and the other over the ovarian region. In the treatment of non-deforming club foot, he sometimes employed stretching, and sometimes tenotomy, depending upon the nature of the case. If the tendo Achillis or plantar fascia gave a reflex spasm when stretched to its utmost, while joint pressure was applied, his experience had been that tenotomy was necessary. If no reflex spasm was produced, the contracted tissues could be stretched.

Dr. Ridlon asked if the author considered the woman exhibited by Dr. Whitman, to have a pure non-deforming club foot, and whether he would expect to fully relieve the disability and restore the full flexion by the use of a stretching apparatus.

Dr. Halsted Myers reported a case of non-deforming club foot in a man, 38 years of age, in which the etiology was unknown. The symptoms were unusual in that although the ankle flexion was only stopped at 95°, the principle complaint was that the knee could not be fully extended. The patient also felt that he could not fully extend his thigh without much more effort than on the other side, and also felt that his pelvis was tilted up posteriorly. The man knew nothing of anatomy, yet these symptoms were reasonable theoretically, for shortened gastrocnemii might cause knee flexion, and this, in turn, thigh flexion, and this again, tilting of the pelvis up posteriorly. The shortening of the gastrocnemii was the only deformity apparent, yet the subjective symptoms were so annoying that the patient himself proposed forcible extension and fixation in bed, for months even if necessary.

Dr. H. W. Berg said that he had seen many of the cases on which Dr. Shaffer's first paper was based, and not a little credit was due to him for having distinguished these cases from those of chronic rheumatism. Most of those described in the paper of the evening, had been so quickly relieved that he was inclined to think they were not congenital, for, after such a condition had lasted for many years, it did not seem reasonable that they should be relieved by one or two stretchings.

Dr. Hubbard, in closing the discussion, said that he had never seen a case of non-deforming club foot which he thought would consent to an operation for the relief of the difficulty, as the patients did not ordinarily consider it of much importance. Nor could he recall a single case which had not been materially relieved after one or two stretchings, except in those which were rheumatic.

In answer to Dr. Ridlon, he would say that he considered the case presented by Dr. Whitman, a typical one of non-deforming club foot of a rather pronounced type, but he had seen as bad, and even worse cases, relieved by persistent stretching. The treatment was prolonged in some instances by the re-contraction of the muscles, but just as india rubber yields after a certain number of stretchings, so these cases will be permanently relieved after the continued use of the traction shoe. In the case referred to in the paper, the condition had lasted for a long time, and the muscle was well developed, and the time of treatment was still further prolonged by the patient's intolerance of the stretching.

A NEW APPARATUS FOR OVERCOMING THE ABDUCTION OF THE THIGH IN HIP JOINT DISEASE.

Dr. Newton M. Shaffer exhibited a new apparatus which he had devised for the purpose of overcoming the abduction of the thigh in hip joint disease, and at the same time avoiding the infliction of any traumatism upon the joint. It consisted of a thoracic attachment to the ordinary long hip splint, with an arrangement of curved levers actuated by a key, by which motion is imparted to the limb in a direction downwards and inwards, instead of as in other instruments of this class, inwards and upwards. This is the chief feature, and it is on this account, that traumatism is avoided. It can be attached to any ordinary long traction splint, and like the thoracic part, it is to be used only as a temporary arrangement for reducing the deformity.

Dr. Phelps said that he was glad to see that Dr. Shaffer had come to recognize the fact that we cannot act upon the hip joint with any degree of precision without taking hold of the thorax; but he failed to see any necessity for such an apparatus in our armamentarium, as his lateral traction splint did the same thing, and no case of hip joint disease need recover with angular deformity. Since he had devised and made use of his lateral traction fixation splint, which acts on the same principle as the apparatus just exhibited, he had not seen a case in his practice of angular deformity. If such a thoracic splint be applied after the deformity has once been overcome, recovery must take place without angular deformity.

Dr. Shaffer explained that the apparatus he had just presented, was intended only as a temporary apparatus for overcoming persistent abduction of the thigh, and he considered it a very serious mistake to use the thoracic attachment in the ordinary treatment of hip joint disease, because it limited the motion of the spinal column, and this would necessarily increase the strain upon the diseased joint. It was for this reason, that he had discarded the thoracic addition to the hip splint many years ago. The idea of his new apparatus is to provide a temporary means of overcoming abduction, and it is only to be worn long enough to accomplish this purpose, and then it is so arranged that the abduction and thoracic portions can be readily removed, leaving the ordinary hip splint, which permitted a free movement of the dorso-lumbar spine, and thus diminished the traumatism at the hip, which is best shown when a patient with hip joint disease and dorso-lumbar caries, attempts locomotion.

NECROLOGY.

A. M. Pollock, M. D., of Pittsburg, Pa.

Death has touched him with his dart, the honorable and skilful physician and surgeon, Dr. A. M. Pollock. He died June 20, 1892, after a long illness, full of years and experience. I first became acquainted with this honorable gentleman in 1866, since when he has assisted me in many difficult and complicated cases at all hours of the twenty-four. I always felt that I had no ordinary prop to lean upon in trying and difficult cases. He did not practice his profession for glory but for the benefit of his patients. He was unassuming, modest, quiet, cheerful and gentlemanly in the sick room, and rather than claim the credit himself for what assistance he might give or what light he might throw on a case, he would give the attending physician full share of the honor that might be derived from his counsel. He never be-littled the attending physician to his patient, or to his friends. He always left the attending physician after a consultation with more of the patient's and patient's friends' confidence than before the consultation. He would not suggest a change in treatment unless it was actually necessary for the benefit of the patient, and then it would be made in such a gradual manner that it would be passed unnoticed. He had the "touch of a lady" and whilst he may not have had the other two attributes of the surgeon "the heart of a lion and the eye of an eagle," yet he had other qualities which are far higher—good judgment, skill, caution and conscientiousness. He would not operate for the sake of operating. He would feel morally certain that the operation would benefit the patient before he would consent to perform the operation, and now that he has gone his loss will be deeply felt. His chair is vacant. We shall miss him socially and professionally. May God bless him. His works will follow him. J. M. B.

DR. HENRY F. FORMAD, of Philadelphia, who died recently, was an eminent physiologist and original investigator. He was born in Russia about forty-five years ago. While yet a lad, he was called upon to serve in the medical department of the Imperial army. He was suspected of political heresies, and he became an exile after having served a term of imprisonment. He went to Berlin and Heidelberg studying medicine and microscopy, especially; at the latter place he took his degree, with honors. He became for a time a *docent* in histology and microscopy, which subjects were then comparatively little developed or taught. With Dr. Wier Mitchell he made some original researches as to the poisons emitted by insects. With Dr. H. C. Wood, he did some work for the authorities at Washington, regarding the infective processes of diphtheria. The results were published about 1880. He became a member of the American Medical Association in 1889.

DR. WILLIAM RANDALL BIRDSALL, of New York, died on the 7th of June, aged forty years. He was a graduate of the University of Michigan and College of Physicians and Surgeons, New York, about sixteen years ago. His specialty was that of the nervous system and he held the physiciancy in the department of nervous diseases in the Manhattan Eye and Ear Hospital. He was a member of the Academy of Medicine and numerous other Societies.

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SATURDAY, JULY 2, 1892.

BY-LAW IV OF THE AMERICAN MEDICAL ASSOCIATION.

The Publication of Papers and Reports.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Board of Trustees on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

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NEW CASES OF INDIGENOUS FILARIAL DISEASE.

In a recent number of *Public Health*, MR. AUSTIN WILLIAMS, of Liverpool, reports a case of filaria sanguinis hominis, occurring in that city. About one year ago, an adult male noticed that his early morning urination was followed by a few drops of blood mingled with, or suspended in a jelly-like mass. After a few negative examinations with the microscope had been made, the suspected filaria was discovered. This chyluria has continued until the time of report. Hæmaturia of a severe character has also occurred, the blood appearing most copiously in the morning. This attack subsided after a time, and then the patient's condition relapsed to his usual state of passing a drop or two of blood, with chylous urine, on rising in the morning. The man has never been out of England, nor very far away from Liverpool. MR. WILLIAMS knows of no other possible way in which his patient could have contracted the disease, except that he has been exposed to the emanations from the intestines of animals, some of them imported from southerly ports, which animals may have been infested with this parasite. A physician of DR. WILLIAMS' acquaintance, name not given, has informed him privately of a case of chyluria in the person of a man, whose duties brought him into contact with imported cattle.

In August of last year, DR. R. M. SLAUGHTER, of Theological Seminary, Virginia, found two apparently indigenous cases in his State. He has given a report of his cases, with an illustration, in the *Medical News* for December 5, 1891. While engaged in microscopic work, he was surprised to find in the urine of two patients unmistakeable evidence of the embryo form of filaria sanguinis. Indigenous cases have been reported from Charleston, S. C., to the number of twenty-two, by DR. DE SAUSSURE; also one other case by DR. MASTIN, of Mobile. Adding the two cases of DR. SLAUGHTER to those, there have been reported just twenty-five cases in the United States, believed to be indigenous.

DR. SLAUGHTER made a careful investigation at the Library of the Surgeon-General of the Army at Washington, but he was not able to increase the total beyond the twenty-five cases just referred to; it is true that other cases of filaria sanguinis have been reported, but they were not of indigenous origin. Those cases had been imported from tropical countries.

The cases reported by MR. WILLIAMS and DR. SLAUGHTER have enlarged the bounds of this variety of indigenous parasitism to and beyond the thirty-eighth parallel of latitude, north. They are probably the first recorded cases of their kind in their respective localities. The condition of the blood was reported as to none of these three cases. DR. SLAUGHTER had desired to examine the blood of his two cases, but had not been able to do so. Embryo filaria was found in the pus of an alveolar abscess in one of his cases that showed a tendency to the production of furuncles. The hæmato-chyluria of these cases appears to have been the maximum of pathological results; the lymphatic manifestations so frequently observed in chronic filarious infection, such as chylocele, lymph-scrotum, lymph-leg, lymphangitis, glandular tumors and abscesses, etc., etc., were absent.

All cases of chylous disease should be investigated microscopically. Many of them have been so examined in recent years with negative results. One such we recall as having occurred not long ago at the Philadelphia Polyclinic, in the practice of that admirable clinician, DR. SOLOMON SOLIS-COHEN. The patient

was a colored lad, from the island of St. Thomas, having chyluria. Although repeated examinations of both urine and blood were made by the reporter and by the late DR. JOSEPH LEIDY and by PROFESSORS TYSON, HEILPRIN and GRIFFITH, the suspected parasite was not to be found. In the case of the Charleston chylous series many negative examinations were made prior to 1886. Finally in that year, DR. JOHN GUITERAS was the first to detect the embryo specimen in chylous urine and in blood. The embryo worm is somewhat elusive of microscopic research. The following description taken from DR. RUDOLPH MATAS' contribution in the *New Orleans Medical Journal*, January, 1891, shows why the helminth is most successfully sought in fresh fluids: "When first seen under the microscope the parasite presents itself as a transparent and almost structureless little worm, which moves with vigorous and graceful serpentine movements in the blood current, dashing along and ploughing its way rapidly through the mass of blood corpuscles. If the medium becomes dry, these organisms become granular and assume a striated appearance owing to the retraction of the enveloping membrane, or chorionic sac. If they are abandoned in an extravasated fluid, or in urine,or in ascitic liquid, they become invisible after a certain time."

The therapeutics of filarial disease are commonly aimed at the removal of the adult worm by some appropriate surgical procedure. No specific remedy antagonistic to the embryonic form that roams through the circulation has yet been found. Thymol, however, has been reported upon favorably from India by Surgeon-Major LAWRIE. He has given to the *Lancet* reports of two cases of apparent cure of chyluria of filarious origin by one grain doses, every four hours, gradually increased to five grains. DR. SOLIS-COHEN, in the case already referred to, made use of a placeboic remedy which to the mind of his patient exhibited the "startling virtue" of clearing up the milky urine, and by the end of a week making it "perfectly clear." Now this remedy chanced to belong to the aromatic vegetable group as well as thymol; it was aqua menthæ piperitæ, given in six drop doses thrice daily. Can it be possible that there was enough of remedial potency in that mint-water, superadded to the effects of this more northerly climate upon a lad —who had been nine years absent from the hot-bed of filarial infection—to stamp out the last particle of vitality in a moribund and expatriated parasite, and really clear away a last feeble barrier to the normal flow of the chylous circulation? Let the answer be what it may, there can be no harm in suggesting that some of the products of thyme and mint may be serviceable in chyluria and other chylous cases, whether their origin be shown to be filarial or not; the treatment to begin after having made a check-examination with the microscope of both blood and urine of the patient. It may be that the vegetable aromatics are the appropriate antagonists against certain forms of animal parasitic infection.

THE THIRD ANNUAL SESSION OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

One of the most important of the National Associations holding their annual meeting contemporary with that of the meeting of the American Medical Association is the above named body. Its third annual session, recently held at Detroit, was most successful. Among the list of new members we observe Harvard represented by PROF. HARRINGTON, and Woman's Medical College of Pennsylvania by PROF. JOHN B. ROBERTS. The membership now includes two-thirds of the regular schools of the United States, including nearly every well established reputable institution. The exception to membership is notably from the schools of the Southern States. The situation in the South is best explained in the statement of a representative of one of these schools in a communication withdrawing from membership in this body. He says unless certain other competing colleges in my locality join, we cannot remain a member, and consequently withdraw until such time as these colleges see fit to join us in promoting this desirable reform. We are of the opinion that the intelligence and pride of the South is such that the representatives of these colleges will not require repeated urging, but that they will indicate by their immediate action that they purpose keeping abreast of the recent reforms in medical education. We believe the near future will see this a very strong society, including in its membership all the reputable colleges of the country. There is no urgent reason why the representatives of colleges themselves should not meet together as occasion requires, and in a business-like manner correct their own abuses, as they may exist, and receive that benefit certain to come from mutual gathering of bodies of people pursuing like avocations, and whose thoughts pursue the same channels. Representative bodies of this character have become a social and business necessity. We have our National associations representing our different business, church and educational interests. The bodies representing the professions of dentistry, pharmacy, engineering, etc. If we mistake not, a successful organization of this character will render less necessary such urgent appeals for the regulation of medical practice and medical education by State legislation. The action of the American Medical Association in endorsing the "minimum of requirements" of the college association, and directing the Secretary, DR. ATKINSON, to so notify the different colleges, is suggestive of professional sentiment at the present time. The papers of DRS. N. S. DAVIS and VICTOR C. VAUGHAN were well worthy of

their distinguished authors. The title of the first paper was "To What Extent Should Clinical Instruction be Afforded Students of Medicine in Regular Courses?" and of the latter, "To What Extent Should Laboratory Instruction be Afforded Students of Medicine in Regular Course?" The discussion upon the paper of DR. VAUGHAN was postponed for one year, and DR. RIGNELL H. FITZ, of Harvard, invited to open the discussion at that time. DR. VAUGHAN'S paper outlined a very comprehensive course, well adapted to the new course to be enforced at the university he represents. Its practical enforcement by the colleges would render easy the solution of the question of higher medical education in the United States. DRS. N. S. DAVIS and PERRY H. MILLARD were reëlected President and Secretary.

As the mouthpiece of the great body of medical men in this country, THE JOURNAL welcomes the new organization, and bespeaks for them a bright and most useful future.

MISTLETOE AS AN OXYTOCIC.

In the *Medical News*, DR. H. P. HOWARD, of Virginia, reports his personal experience with mistletoe as a substitute for ergot. In one case of very protracted labor, where there was apparent cessation of uterine contraction, the drug was of signal benefit, after a variety of other measures had been resorted to without the least benefit. He used the fluid extract at irregular intervals, with the effect of terminating labor in about five hours. There were produced a typically normal uterine contraction, both as to strength and regularity. The third stage of the labor was ended by the same pain as that which followed the expulsion of the fœtus. The womb then contracted firmly, promptly, equably and with a minimum amount of hæmorrhage. In this case delivery was almost wholly uterine in action. The patient was a chronic sufferer from cardiac asthma from mitral lesions and hypertrophy, also peritoneal inflammatory complications; so that any sustained abdominal efforts were out of the question, or if they had been relied upon, the labor must have terminated in death. In this view of the case, the author accords to the drug the largest share of credit for the unexpectedly favorable outcome of the parturition. The author gives some literary information regarding the history of mistletoe as an oxytocic. DR. W. H. LONG, of the United States Marine Hospital Service, published in 1878, some favorable results from a ten years' trial of the drug. He claimed that he had found it superior to ergot in labor. He advocated the use of the drug in post-partum hæmorrhage, menorrhagia and hæmoptysis. DR. LONG'S paper appeared in *New Preparations*, and in the *Louisville Medical News*, for the same year, 1878. In DR. LONG'S opinion the drug was capable of producing intermittent uterine action, as distinguished from the tonic contractions caused by some other oxytocic medicines.

About forty years ago, DR E. B. TURNIPSEED called attention to the fact that mistletoe had a certain popular reputation as an aborti-facient. His paper was published in the *Charleston Medical Review*, in one of its earlier volumes. The general therapeutical rating of mistletoe is that it is inert, unmanageable and obsolete, whereas neither of these designations may be the truth.

ARTIFICIAL URETHRA IN PROSTATIC OBSTRUCTION.

An article in *Medical Press and Circular*, May 11, gives to DR. HUNTER MCGUIRE, the newly elected President of the American Medical Association, the credit of priority, over one or two French surgeons, in planning and performing his operation for the relief of chronic prostatic disease. The writer states the dates and places of publication of first papers on the subject sufficiently to prove DR. MCGUIRE'S precedence. He says that he notices the matter because he thinks "that it is very desirable that the praise and credit of devising and successfully completing a new and much required operation should be *justly* awarded; and we feel that our contemporary *L'Union Médicale* and our professional brethren in France would not unwittingly deprive one of the most distinguished surgeons of the English-speaking peoples, DR. HUNTER MCGUIRE, of his well-won honor."

It was at the convention in 1888 of the American Surgical Association, that the first two cases of DR. MCGUIRE were reported. His paper was published in volume six of the Transactions of that Society, under the caption of "The Formation of an Artificial Urethra in Prostatic Obstruction," and a later contribution, entitled "A Report of Twenty-one Cases of Supra-pubic Cystotomy, with Remarks," appeared in the eighth volume of the same Transactions.

Two French surgeons have done the same or a similar operation for cystitis and prostatic hypertrophy. The former of these was probably DR. F. VERCHERE, who in the early part of 1889 made a supra-pubic fistula under the guise of an artificial urethra. Following him DR. PONCET has operated not less than thirty-five times upon cases of enlarged prostate that were not remediable by less serious surgical intervention. The writer in *L'Union Médicale* describes the PONCET procedure as "an anterior supra-pubic, artificial urethra which will be of very great service in chronic prostatic disease." The advantages of the operation were not admitted by all the surgeons who discussed DR. MCGUIRE'S paper in 1888, although PROFESSOR GROSS congratulated the author that he had been enabled to bring out the new operation based upon the physiology of urination and mechanism of the bladder. Among the other surgeons

who offered their views on the subject at that time were SIR WILLIAM MACCORMAC, REGINALD HARRISON, ANNANDALE, ARTHUR DURHAM, HINGSTON of Montreal and HAYES AGNEW. The greater number of these were wedded to the older methods, while some of them regarded the supra-pubic operation as dangerous out of all proportion to the benefits to be obtained. DR. AGNEW took the position that a skilled operator may do the supra-pubic section with perfect safety, while an inexperienced person might unexpectedly find himself doing an intra-peritoneal operation. DR. MCGUIRE remarked that in his operations he had not met with the peritoneum.

EDITORIAL NOTES.

PREVENTION OF BLINDNESS.—A committee was appointed by the Medical and Chirurgical Faculty of Maryland in April, 1891, to devise means for lessening the amount of blindness from curable diseases. This committee prepared a circular which was sent to the midwifes of Baltimore explaining the dangers of ophthalmia neonatorum, and giving directions for cleaning the eyes of the newly born. The necessity for prompt medical interference at the first sign of the disease was also insisted upon.

In addition, in the waiting rooms of the various dispensaries of the city they placed placards, reading as follows: "Watch a baby's eyes carefully for a week after birth. If they look red, or run matter, take it at once to a doctor. The child may become blind if not treated properly." Such work can hardly fail to prove of much value, and should be imitated elsewhere.

A FEE ARBITRATED AND PROMPTLY PAID.—The readers of THE JOURNAL will be glad to learn that Dr. F. E. Waxham has received two thousand dollars for his services in a case of intubation for diphtheritic laryngitis. The parties disputed the bill for six months and at last put it in arbitration. The full charge was allowed, and promptly paid by the happy father.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College has been fortunate in receiving lately gifts of two portraits. Dr. H. C. Wood, for the profession of Philadelphia, gave a fine picture of Dr. Alfred Stillé. Dr. Mitchell, President, presented another portrait, that of Dr. Oliver Wendell Holmes, which was accepted by Dr. J. M. Da Costa, Vice-President. Dr. Holmes was prevented from being present, but he sent a reply in verse which contained numerous references to the convention of 1847 of the American Medical Association, held in Philadelphia, which was at that period the medical Athens of America. The poem of Dr. Holmes was read by Dr. Mitchell, who explained some of the more recondite allusions of the poem. Dr. Mitchell also contributed a poem of his own to accompany his admirable gift. The portrait of Dr. Holmes is the work of Mrs. Sarah Whitman, and is thought by many to be the most satisfactory counterpart of the poet-doctor ever made; he is represented life-size, half-length, and is garbed in the black robe of the Philadelphia College.

The papers have announced that the College will receive a bequest of $1,000 under the will of Dr. D. Hayes Agnew.

MEDICAL BEQUESTS OF THE LATE DR. AGNEW.—Dr. Agnew has left an estate appraised at a quarter million. To the University of Pennsylvania he has given all his right and title in his great surgical text-book, also numerous specimens and drawings appropriate to pathological teaching. After the death of his widow the University Hospital will fall heir to $50,000. The Maternity and Kensington Hospitals will then receive $1,000 each. An equal amount will go to the College of Physicians.

SURGICAL TERMINOLOGY.—At the Surgical Congress held at Paris, in April last, Dr. Ferrier treated of hepatic surgery, and gave specimens of the enriched vocabulary of that rapidly growing department. Among the terms mentioned were hepaticostomy, hepatostomy, cholecystostomy, choledocholithotripsy, cholecystenterostomy, cholecystolithotripsy and some others; nearly all of them derived from the Greek language and expressing some newly proposed operative modification.

ABSTRACTS.

METHYLENE-BLUE IN MALARIAL FEVER.—W. S. Thayer (*Bull. of Johns Hopkins Hosp.*, May, 1892). In consideration of the fact that methylene-blue has the power of staining the malarial plasmodia in the cells of fresh blood as well as in dried blood, Guttmann and Ehrlich originally suggested its use in malarial fever. They observed two cases. The first was one of tertian ague to whom one dose of 0.5 G. (7½ grs.) of methylene-blue was given No malarial organisms were found in the blood after the third day. The second case was one of quotidian ague and under the use of the remedy, the plasmodia disappeared from the blood after six days. Thayer has observed seven cases of malaria treated with methylene-blue in Prof. Osler's wards.

In the first case, one of tertian ague, the patient was given 0.1 G. methylene-blue in capsules five times a day. On the next day the temperature rose to 105° but there was no chill. After this there were no further malarial symptoms, but the organisms did not disappear from the blood until the third day. The remedy produced burning with micturition and vesical tenesmus. The second case was one of chronic remittent fever with hyaline bodies and pigmented crescents in the blood. The temperature fell to nearly normal in five days, and there was marked diminution in the number of organisms. During the next month irregular, slight febrile attacks occurred, and with eventually an increase in the number of organisms in the blood. It seems from the report that the patient received the methylene-blue regularly for about four weeks, also toward the last of this period, Fowler's solution. Finally quinine was given in four grain doses three times a day, with return of the temperature to normal. The quinine was continued for eleven days and at the time of his discharge, the blood showed an occasional hyaline body, and pigmented crescent. His general condition improved rapidly under the quinine. The remaining cases illustrate more fully the features of the first two. The cases were all carefully observed, and the following conclusions which Dr. Thayer offers, seem fully justified by his report:

1. Methylene-blue has a definite action against malarial fever, accomplishing its end by destroying the specific

organism; but it is materially less efficacious than quinine, failing to accomplish its purpose in many cases where quinine acts satisfactorily.

2. The action appears to be rapid, the chills disappearing or the temperature, in the remittent cases, falling to normal during the first four or five days; but later, however, if a sufficient number of organisms have resisted the drug, they appear to develop again directly under its influence, causing a return of the symptoms.

3. Methylene-blue seems to have no advantages over quinine which would warrant its further use.

Giant Growth of the Colon.—H. F. Formad (*Univ. Med. Mag.*, June, 1892). Dr. Formad recently exhibited a very unique specimen before the College of Physicians, Phila. The specimen was an enormously developed colon. The patient from whom the specimen was taken was a man 29 years of age who had been found dead in a water closet, and thus became the subject of coronial investigation.

His history as obtained from his mother, shows that up to the age of eighteen months he was a normal infant with the exception of a rather large abdomen, some irregularity of the bowels and attacks of constipation. The abdomen continuously increased in size, and the constipation became more marked. At sixteen he would go as long as a month at a time without a movement of the bowels. At twenty years of age he was exhibited in a dime museum as the "Wind bag" or "Balloon Man." Lately he had abdominal pain, tympanites, and shortness of breath. At the autopsy the colon was found to be 8 feet, 4 inches long, and its circumferential measurement at various parts as follows: Cæcum 10 inches; ascending colon, 15 inches; transverse colon gradually increasing from 15 to 30 inches; descending colon, 25 inches; sigmoid flexure 25 to 27 inches. The rectum was of normal size. The meso-colon was abnormally large and thick. The colon contained about two and a half pailfuls of fecas, which weighed forty pounds. The coats of the colon appeared to be normal. The other viscera were normal but displaced to accomodate the colon. There was no evidence of an obstruction and Dr. Formad regards the case, not as one of ordinary dilation from retention of feces, but an actual overgrowth of colon.

Phenacetine in Urinary Troubles.—Traill Green (*Univ. Med. Mag*, June, 1892). The writer calls attention to the relief which phenacetine has given in his hands, in cases of frequent micturition in old people. He calls attention to the well known fact, that old people are often troubled with strongly acid urine, which calls for frequent micturition. At times this so interferes with rest at night as to seriously interfere with their general health. He has recently been in the habit of prescribing in such cases, 10 grs. of phenacetine at bedtime, with generally complete relief of the symptoms. He does not recommend its use in enlargement of the prostate.

Piperazine in Gout.—Schmidt (*Jour. de Méd. de Paris*, May 22, 1892). Schmidt advises the employment of this remedy, which holds an important place in the treatment of gout, in the following ways:

1. In a dose of 1 G. (15½ grs.) daily dissolved in simple water, or in Seltzer water.

2. In .5 per cent solution, piperazine causes no irritation of mucous membranes, so that a solution of this strength is suitable for lavage of the bladder, and gradual dissolution of uric acid calculi there.

3. Owing to its ready solubility in water, it may be used in 10% solution for direct injection into the uric acid tophi themselves.

4. Piperazine, ½ gram; Alcohol, 20 gram; Water, 80 gram. This solution may be used on compresses as a direct local application to gouty deposits, and will favorably influence the action of piperazine administered by the mouth.

DOMESTIC CORRESPONDENCE.

To the Editor of the Journal of the American Medical Association:

In giving the following statement, as the result of a careful investigation of the sanitary condition of the Hotels Ponce de Leon, Alcazar, and Cordova in St. Augustine, Fla., and of such accounts of the cases of fever which occurred in guests of these hotels during the spring of 1892 as it has thus far been possible to obtain, I am satisfied that no one of these cases of fever was caused by the water supply, or by the drainage of the buildings, or by anything connected with them or their surroundings. The water supply has been examined chemically and bacteriologically, the plumbing and house drainage of each hotel have been carefully scrutinized, the sources of milk supply, of ice, and of fresh vegetables for the use of the guests of these hotels have been investigated, and no causes of disease have been found in any of them. There have been no cases of typhoid fever among the residents in St. Augustine during the past year, and the general sanitary condition of the town is excellent.

Between December 15, 1891, and April 25, 1892, about 25 cases of typhoid fever are reported as having occurred in about 25,000 persons who visited St. Augustine. Fourteen of these cases occurred among visitors while they were in the town—and eleven are said to have occurred from two to three weeks after the patients had left the town. In addition to the above, four cases are reported in hotel servants and one in a nurse. Seven of the cases in visitors while in the town were in the Hotels Ponce de Leon, Alcazar, and Cordova, and six of the cases reported in persons who had been gone from two to three weeks were also in guests of these three hotels. In all, therefore, out of about 1,600 guests of these hotels, thirteen are reported as having been affected with typhoid. The investigation into the details of these cases is not yet completed, and I can only say now, that it is probable that two or three of them were not typhoid fever at all, that two of them were ill on the day of their arrival, which illness became well marked typhoid five days later, and therefore, was not contracted at St. Augustine, and that of all the cases at the above mentioned hotels, there were among the guests but three which it would seem must have been contracted during their stay in St. Augustine. The four servants affected with typhoid probably had the specific cause introduced into their bodies through contact with a fever case, or cases, or with soiled linen from such case.

Every educated physician will understand from the above figures, the extreme improbability that so few cases, scattered over a period of two months, and giving a ratio of less than one to a thousand people exposed, could have been due to anything in the structure of the buildings, the general water supply, or the food, milk or ice—and the detailed investigation of all these things makes it practically certain that no case of typhoid was due to any of them.

Whether the investigation, now in progress, into the history of the reported cases will indicate the source of the disease, is of course, doubtful, and probably the cases had no common source, but were each contracted at a different time and in a different place—but knowing, as I do, the great interest in these Southern winter health resorts felt by a large number of Northern invalids, it has seemed best to make this preliminary statement in order to assure them that they can make their plans for going to St. Augustine next winter with perfect confidence that—while absolute security can be had nowhere—so long as they are there they

will probably be less liable to be exposed to the contagion of typhoid fever than they will be if they remain at home.

I. S. BILLINGS, M.D., Surgeon U. S. A.

BOARD OF HEALTH OF ST. JOHNS COUNTY.

ST. AUGUSTINE, FLA., June 10, 1892.

We, the Board of Health, of St. Johns County, Florida, do hereby certify that, prior to the month of April A. D. 1892, there were no deaths reported to this Board resulting from fever of any kind, nor does this Board have any knowledge of the existence of any case of fever in the City of St. Augustine, or St. Johns County prior to the period above mentioned; that during the month of April A. D. 1892, the following deaths from fever were reported to this Board.

1. Florence Hawley Glover Clark, white, female, age 37 years, residence Newton, Conn., died April 3, 1892, cause of death typho-malarial fever, reported by F. Fremont Smith, M.D., attending physician.

2. Elizabeth M. Park, white, female, age 35 years, residence Rye, New York, died April 5, 1892, cause of death typho-malarial fever reported by F. Fremont Smith, M.D., attending physician.

3. Joseph N. Knight, white, male, age 34 years, residence Highwood, New Jersey, died April 14, 1892, cause of death, typhoid fever, reported by F. Fremont Smith, M.D., attending physician.

4. Irene L. Davis, white, female, age 26 years, residence Philadelphia, Penn., died April 17, 1892, cause of death, typhoid fever, reported by F. Fremont Smith, M.D., attending physician.

That all of said deaths occurred in the City of St. Augustine; and that since the 17th day of April, 1892, there has been no report to this Board of death from fever of any kind.

We further certify that the rules of this Board require attending physicians to report deaths to this Board within 24 hours after the same occur; and that all deaths are so reported by the physicians of this county in whose practice a death may occur; that at the present time we have no knowledge of the existence of any case of fever in the City of St. Augustine, or the County of St. Johns, but the certificate of practicing physicians in this city and county, is, in our opinion, the best evidence as to whether or not fever of any kind exists here at the present time.

We further certify that the sanitary condition and healthfulness of this city and county are very good and have never been better.

[SEAL.] WM. F. SHINE, M.D.,
Pres't St. Johns County Board of Health.

(Signed) T. E. B. KERNAN, A. J. CORBETT, SEC'Y.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

In THE JOURNAL of June 25, is published a report of the proceedings of the meeting of June 8. In that report there is nothing said of my substitute or amendment to Dr. Willis P. King's motion in regard to the committee of five from the American Medical Association, and one of five from the New York State Medical Society. My amendment added five from the New York State Medical Association. It was carried. The report reads: After further discussion Dr. Gihon offered the following amendment to Dr. King's resolution, which was accepted by the latter. Then follows the resolution, in which the names of Drs. Potter and Vander Veer are mentioned. Their names were not mentioned in the original motion. It was so decided next day.

Sincerely Yours, J. G. TRUAX.

New York, June 27, 1892.

FOREIGN CORRESPONDENCE.

Public Vaccination in Berlin.

There are to be seen in Berlin at the present time multitudes of children bearing their school-books under one arm, while the other (always the left), has pinned conspicuously to the sleeve of the outer garment the Geneva Red-cross. On inquiry of one of the urchins, he immediately divested his arm of its covering and exposed to view six typical pustules of vaccination, and explained for my further edification that the Red-cross meant *nicht Drücken*—not to press—rather a quaint idea.

Pursuing the subject farther, I have been able to obtain such information which I am led to believe places vaccination as to its methods, etc., on a plane rather different from that as at present practiced in America. On invitation of a colleague to whom I expressed the wish, I was enabled to see him vaccinate upwards of 200 children in a session lasting scarcely an hour; of the method employed I shall speak hereafter.

The gathering at a specified time of some fifty mothers with their babes, besides 150 other children whose average age is 12, for vaccination, is the finesse of a system which probably only such a Government as this can carry out. The authorities knowing of all births, a postal card is sent to the parent of a child born the previous year to bring the infant on such a day for vaccination, under penalty of a fine; besides, the law reads, all children approximating the age of 12 must be revaccinated under the same penalty. This is a *compulsion*, and it is this that makes the system here such a perfect one. The peculiarity of the law makes a child born December 31, 1891, undergo vaccination in 1892, while if its birth occurred a day later it would not be vaccinated till 1893, provided in all cases it be fit; *i. e.*, not suffering from disease, when if that be the case, a record is made of the fact, and the child is not bothered till the following year.

Thus in its first year the child is vaccinated, and again at 12; then, as far as the female portion of the population is concerned, the matter ends. As regards the male, he is revaccinated when he joins the military, and then only for sanitary precautions taken in all such large bodies. While this latter point may have some weight, still the theory of susceptibility differs much from ours, exemption being considered fully attained when the subject has been, as above described, vaccinated twice. It need scarcely be mentioned that where small-pox appears in a family the entire house is vaccinated. The entire house in Berlin, by the way, consists of from fifteen to thirty families, and therefore quarantining is impossible.

As regards compulsion with us at home, while it is thoroughly practiced in the schools, there are still quite a number of children who are not included, and who have escaped the vigilance of the district vaccination physician. We have compulsion at quarantine which has reached perfection, but there are some children born in America who up to a late date could pass peaceably enough through life without the well-known scars. Probably Cook County, Illinois, owing to its Compulsory Education Law, for which we ought to be thankful, is one of a very few places where vaccination is complete and thorough. To illustrate which I mention a case of *primary vaccination* in a child of 10 who, born by the aid of a midwife (whose highest ambition was probably to collect her fee), grew in poverty and ignorance till he attained that age when he could help earn something for the maintenance of the family. The Compulsory Educational Act coming into effect, the boy was surprised, pleasantly we may hope, by having his face washed, some neat apparel given him and sent to school; afterwards to the physician to fill out the vaccination certificate. In this case nothing was discovered on either arm but the accumulation of dust of years, which on removal could not unearth a single scar. Fortunately, these cases are now exceedingly rare, and it is questionable whether in a little while they will not disappear entirely.

As to the methods. I saw the vaccination physician operate on some 200 cases in a series of 2,000, and his *modus operandi* is worthy a description.

The animal lymph which is supplied by the Government

is in liquid form, and is sent in minute glass tubes containing a sufficient quantity for fifty or one hundred vaccinations, each tube bearing the number of the calf from which the lymph is taken; a report being made by the physician as to its qualities by its effects on the patients. To be noted in this connection is the fact that if the vaccination does not take the first year, it is compulsory on the part of the parent to bring the infant a second year, and if no result is then attained again the third year, which proves final whether the vaccination is successful or otherwise.

The vaccination knife of Kerstein was used. It consists of a blade which is as thin as a spatula, sharpened on both edges, and whose length is 1 inch with a width of ¼ inch, which does not taper to a point, but is ⅛ inch wide at its tip; it is with this tip that all the incisions are made. The skin of the arm is made tense and, in case of a babe, four incisions are made on each arm after the tip has been slightly dipped into the lymph, once for each arm. With the infants antisepsis is practiced, wetting the blade in water after each vaccination and cleaning with antiseptic cotton. In the grown children antiseptic precautions are not used, and six incisions are made, but only on one arm. Of paramount importance in all the cases is the art of incising without drawing blood, in that event the lymph is liable to be washed away, and I must confess that I failed to see a single drop of blood from any of the incisions, which numbered over a thousand.

I was afforded an opportunity of noting the result of this method of vaccination by observing the same 200 subjects that I had seen vaccinated, who came eight days later to report and to receive their certificate. They all showed the typical pustules, and scarce in any case, of the infants especially, was there any failure of a single incision to produce its characteristic sore. As regards this the law is that in case of infants, if but one pustule results, it must be immediately revaccinated, the physician using the contents of the pustule for that purpose; while in the grown children, if but one incision "takes," that is sufficient.

One can conclude from this that the vast majority of physicians here, as it is now with us, pass their lives without seeing a single case of small-pox, and know only of the disease by its description in the books.

JACOB ROSENTHAL, M.D.

Berlin, June 7, 1892.

SELECTIONS.

A WORTHY SANITARY FEAT QUIETLY ACCOMPLISHED.—It is alleged for General Rusk that he has greatly improved the treatment of cattle exported to Europe for food purposes. The mortality among them at sea, resulting from cruelty, want of water, etc., was formerly stated at 16 per cent., while at the present time it is 1 per cent. The value of these exportations is not far from $25,000,000 annually. If this statement is only partly true, General Rusk has accomplished a great sanitary reform, for he has been the means of indirectly purifying the flesh-food supply of thousands of European consumers.—*New York Med. Journal.*

EFFECTS OF AN OVERDOSE OF CODEINE.—An overdose of codeine is not a common occurrence, and therefore Dr. Mettenheimer, who has met with such a case, has reported it. An elderly lady consulted him for a slight catarrhal nonfebrile affection which, however, gave rise to a troublesome, spasmodic form of cough. For this he prescribed 0.03 gram (about half a grain) of phosphate of codeine, in the form of a pill, to be taken every three hours. The patient, however, swallowed four of these pills, or about a grain and a half of the codeine salt, at once. Shortly afterwards she vomited twice and suffered from abdominal pain. There was, too, suppression of urine and she felt very ill, being sleepy but unable to go to sleep. The next day she was still drowsy and had no appetite but there was no return of the sickness. She was then seen by Dr. Mettenheimer, who found the pupils hard and contracted, the pulse hard and quick, and the respiration accelerated. The cough had entirely disappeared. The contracted state of the pupils, the loss of appetite, and the abdominal pain persisted for several days. No urine was passed until thirty-six hours after the pills were taken. On the third day the drowsiness had passed away. The cough did not return for a week and when it did it was comparatively slight. This case seems to show that codeine in large doses has a very similar effect to opium and that it may prove a most efficient remedy for some kinds of cough. As the tongue remained clean it would appear that the vomiting was due to cerebral, rather than to gastric, irritation. —*The Lancet.*

THE PANCREAS AND DIABETES.—Professor Seegen, one of the chief authorities upon diabetes in its physiological as well as its clinical aspects, recently read a paper before the Medical Society of Vienna, in reference more particularly to the recent researches upon extirpation of the pancreas and diabetes, and having regard to Lépine's explanation that the pancreas produces a glycolytic ferment, the lack of which causes an accumulation of sugar in the blood. Professor Seegen says that, granting that the blood of a diabetic patient has less glycolytic action than that of a healthy subject, it is assuming a great deal to hold that this proves the presence in health of a special glycolytic ferment manufactured by the pancreas. By careful experiments he finds that the normal sugar disappears most rapidly from freshly drawn blood when the latter is maintained at a high temperature (39° C.), whilst a current of air is being passed through it. That this is not due to the action of living protoplasm he shows by the addition of chloroform (to kill the protoplasm), which makes hardly any difference in the glycolytic action. Moreover, since the glycolysis goes on more actively after the blood has been drawn for some time than at first, Professor Seegen infers that the ferment is produced by some change in the blood outside the body rather than by the pancreas. He does not discuss the question of the diminution of this ferment in the blood of diabetics (men or animals), but refers to Minkowski, who found the sugar rapidly diminish in blood from a diabetic dog. Professor Seegen suggests that diabetic blood may contain something antagonistic to glycolysis, so that even if Lépine's experiments are correct, they do not necessarily point to a diminution of the ferment in that disease. He holds, therefore, that the explanation of "pancreatic diabetes" has still to be found. Minkowski showed that if a portion of the pancreas (in animals from which it had been extirpated) were transplanted beneath the peritoneum, the diabetic condition is averted, only to appear when the transplanted organ is removed by a further operation. This, as Professor Seegen points out, is comparable with the effect of experiments in thyroid grafting by Eiselsberg, who found that tetany did not occur until the transplanted organ had been excised by a second operation. Morbid anatomy has, however, abundantly shown that in cases of diabetes the pancreas may be quite normal, so that, in fine, upon this question Professor Seegen agrees —and, indeed, has always maintained—that in cases of diabetes there is diminished glycolytic action in the body; but he denies that Lépine has proved this to be due to disease of the pancreas causing a diminished production of a hypothetical ferment.—*London Lancet.*

DISEASE OF THE BRAIN FOLLOWING SIMPLE OPERATIONS ABOUT THE NOSE. By Wagner (*Münchener med. Wochenschrift*, 1891, No. 51).—To three cases of operation on the nose (mid-

dle turbinate bones) followed by fatal meningitis collected in medical literature, the author adds one which came under his notice. In the case of a man, æt. twenty, suffering from chronic hypertrophic rhinitis, the galvano-cautery was applied to the anterior part of the lower border of the left middle turbinate bone. Three days after there was a smart venous hæmorrhage from the posterior nares, and headache. The bleeding was eventually stopped by plugging. The temperature then went up to 40° C., the pains continued, Cheyne-Stokes' respiration supervened, with stiffness of and pain in the neck, followed by pains in the joints. Death occurred, with meningitic symptoms, thirteen days after operation. A *post mortem* examination was not made.

Direct infection of the brain (sinuses and meninges) can be explained by the anatomy of the parts. Communication of the veins of the middle and superior turbinate bones with the longitudinal sinus, and of their lymphatics with the subdural and sub-arachnoid spaces. How to prevent such complications is difficult, owing to the impossibility of thoroughly disinfecting the nares. Operations on the middle turbinate bones appear to be specially liable to lead to the above results.—(Kramer, *Centralbl. für Chir.*, No. 12, 1892.)

TREATMENT OF ENTERIC FEVER WITH CHLOROFORM.—Paul Werner (*St. Petersburger Med. Woch.*). The author, after comparing the disease as seen at the present day with the type of twenty years ago, and relating his failure to get the good results he had expected from iodoform, states that he selected chloroform from its well-known antiseptic properties and the recommendation of Behving and Salkososki, and gave it in 130 cases of enteric fever in thirteen months; and as the patients took only its aqueous solution (0.75 per cent.) in doses of one ounce every hour it is hardly surprising that he observed no disagreeable after effects. The meteorism and diarrhœa are said to have speedily disappeared and steady convalescence followed. It is not definitely stated if all recovered nor what was the age of the patients. Amongst children the so-called typhoid fever —febricula—should be recovered from without any medicine whatever, but, as the little ones always like chloroform water, there is no harm in giving it.

HEREDITARY IDIOPATHIC ATHETOSIS.—This complaint is a rare variety of what was usually called paralysis agitans. M. Raymond, in a discourse on the subject, thus characterizes and distinguishes it. The tremor is observable in the forearm when the patient is recumbent, sometimes also in the upper arm as high as the shoulder. On sitting up the oscillations become more marked, and amount to about five in a second. There is no individual trembling of the fingers as in the athetosis of alcoholism, when each finger possesses a tremor of its own. The number of the oscillations somewhat diminish when the patient takes an erect position after rest. There is a slight tremor of the lower extremities when the patient is in bed if he is made to hold them raised from the bed. There are some fibrillar contractions of the biceps. Walking is well performed; the reflexes are good; there is no loss of common sensation. Carrying a heavy weight, and so producing fatigue, increases the tremor. Alcoholic excess diminishes the trembling, thus again marking off the complaint from the paralysis agitans of alcoholic origin. No abnormal movement of the eyelids, lips or muscles of the face; the tongue is sometimes affected. Heat, emotions, and atmospheric changes (? barometrical) increase the complaint. The hereditary character of the disease is well marked. The disease begins early in life, sometimes about the eighth year, and after attaining a certain intensity does not increase. It is distinguished from senile paralysis agitans by the absence of head movement, and from the hysterical form of the disease by the absence of sensory-motor disturbances.—*Provincial Med. Journal.*

GENERAL PURULENT PERITONITIS WITH PERFORATION.—A complete cure in a case of this complaint, generally regarded as certainly fatal, was achieved by Dr. Routier, who opened the abdomen, allowing all the pus to escape and washing the cavity with an antiseptic solution, which was freely used. The wounds were not closed, but free drainage was secured by means of strips of iodoform gauze. Two months after the operation the wounds were found to be completely healed, and the patient resumed his occupation—that of a coal-heaver—and has suffered no inconvenience since.—*Provincial Med. Journal.*

ON THE PATHOLOGY OF DYSURIA SENILIS. By Casper (*Berliner Klin. Wochensch.*, 1892, No. 5).—A few years ago Launois, a pupil of Guyon, put forward the theory that hypertrophy of the prostate was not a local process, but was part and parcel of senile sclerosis of the whole of the urinary apparatus intimately connected with arterio-sclerotic degeneration of the arterial system generally.

The scientific and practical importance of this theory induced Casper to investigate the matter. He examined the kidneys, bladder, prostate and their vessels, and also the larger arteries, of twenty-eight bodies of men over fifty years of age. In the first twenty-four the prostate was enlarged and the aorta atheromatous (arterio-sclerosed); in eight cases only was there arterio-sclerosis of the vessels of the kidneys and of the vesical arteries in the walls of the bladder; in nine cases this condition was present in the small arteries of the bladder and in the prostatic and peri-prostatic vessels. In two cases only this condition was found in the kidneys, bladder, and prostate simultaneously. In the remaining twenty-two cases it affected either bladder and prostate, kidneys and prostate, or kidneys and bladder. The four other cases presented endo- and peri-arteritic processes in the vessels of the urinary apparatus, but the prostate was not enlarged.

Casper cannot, therefore, accept Launois' theory. He admits that hypertrophy of the prostate is frequently accompanied by changes in the vessels, but he holds it is a condition independent of arterio-sclerosis.—(Müller, *Centralblatt fur Chir.*, No. 14, 1892.)

PHARYNGEAL TUBERCULOSIS.—At a meeting, February 11, 1892, of the French Society of Dermatology and Syphilography, M. Jullien presented a woman who was the subject of pharyngeal tuberculosis. The disease had been acquired by cohabitation. Such a rare mode of infection is worth mention. The woman had had for several months relations with a tuberculous individual. Upon the pharynx were seen distinct ulcers, in which M. Jullien discovered the bacillus of Koch.—*Le Progrès Médical*, February 13, 1892. *Medical Bulletin.*

OBSTINATE HICCOUGH.—Dr. H. M. Shallenberger, of Rochester, Pa., recommends fluid extract of physostigma in doses of 4 to 8 drops, pushed to the point of causing toxic symptoms.—*Medical Record.*

MISCELLANY.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from June 18, 1892, to June 24, 1892.

Major John S. Billings, Surgeon U. S. A., granted leave of absence for one month and fourteen days, with permission to go beyond sea.

Capt. William B. Banister, Asst. Surgeon U. S. A., is granted leave of absence for one month, to take effect on or about July 1, 1892.

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